THE UNIVERSITY OF ALBERTA

THE POLITICAL ECONOMY OF STATE OIL COMPANIES: THE CASES OF BRAZIL, NORWAY, AND CANADA

by

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ABSTRACT

The *Political Economy of State Oil Companies: The Cases of Brazil, Norway and Canada* is a study of state oil companies in the international oil system. In particular, the thesis examined two questions: 1) the reasons why the state chooses to establish a state oil company and 2) the issues that this trend poses.

First, the thesis argued that the structure of the oil industry and the nature of the commodity --petroleum-- do much to account for the establishment of state oil companies. It was argued that the structure of the international oil system often frustrates national priorities which are a product of unique political and economic factors. It is the apparent inability of the state to fulfil its national priorities because of the structure of the industry that seems to lead it to intervene directly with the establishment of a state oil company. Moreover, the importance of oil to national economic development and security focuses the attention of the state on the oil industry which contributes to the decision to intervene.

Second, the thesis examined some of the important issues raised by the establishment of state oil companies: in particular, efficiency, accountability and control were examined. In the examination of the issue of efficiency it was argued that utilization of a company's mandate as the sole criteria of performance was insufficient and thus, it was concluded, that some account of cost must be made. In

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the study of the issues of accountability and control it was concluded that at a *minimum* a highly structured relationship was necessary between the controlling agency(ies) and the state oil company.

Preface

The *The Political Economy of State Oil Companies : The Cases of Brazil, Norway and Canada* is a study of state oil companies in the international oil system. In particular we are concerned with two questions: 1) the reasons why the state chooses to establish a state oil company and 2) the issues that this trend poses.

First, this thesis will argue that the structure of the oil industry and the nature of the commodity --petroleum--[1] do much to account for the establishment of state oil companies. It will be argued that there are characteristics inherent to the structure of the oil industry and that oil is a unique commodity which in many circumstances leads the state[2] to become directly involved through public corporations if national priorities are to be fulfilled. An obvious criticism of this approach would be that it discounts the role of unique political and economic factors. In particular, such critiques could point out that some countries do not have state oil companies or that other countries established state oil companies at different times.[3] Quite rightly, this criticism points to the fact that neither the structure of the industry nor the nature of

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[1] The words petroleum and oil are used interchangeably in this thesis.

[2] The word state in this thesis is used to designate the governing authority in the country in question, as are references to the country and its capital city (ie. 'Ottawa' or 'Brazil').

[3] Not to mention the establishment of state oil companies in Eastern Europe and other communist countries.

the commodity can fully answer why and when a state oil company was established: yet, the thesis does not make this claim. What will be argued is that, the structure of the international oil system often frustrates national priorities which are a product of unique political and economic factors. It is this apparent inability of the state to fulfil its national priorities because of the structure of the industry that seems to lead it to intervene directly with the establishment of a state oil company. Moreover, the nature of the commodity focuses the attention of the state on the oil industry in the first place which contributes to the decision to intervene. The structure of the industry acts as a barrier to national goals and the general reaction of most governments has been to establish a state oil company in an attempt to accomplish those goals.

Second, the creation of state oil companies poses some important questions particularly in regard to efficiency, accountability and control. These issues offer some interesting insights into public corporations and will be thoroughly examined.

The thesis will consist of six chapters. First, the introduction will outline the methodology, some theoretical background to relations between the state and the private sector in the development of resources, and a general discussion of some of the issues posed by the establishment of state oil companies. The second presents a thorough discussion of the structural development of the

international oil system and the evolving role of state oil companies primarily in the Middle East. The third, fourth and fifth chapters will comprise an analysis of the state oil companies of Brazil, Norway and Canada, respectively. The sixth chapter will offer some conclusions.

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I. INTRODUCTION

Methodology

This thesis faces the problem of all comparative work: sacrificing some specificity for hazier, general conclusions. Clearly, one cannot be expected to be an expert on countries as diverse as Brazil, Norway and Canada. Consequently, a strict approach was adopted for analyzing each country. Each chapter was constructed in a similar fashion in order to analyze the two areas of concern outlined in the preface: 1) how the structure of the oil industry and the nature of the commodity --oil-- contribute to the establishment of state oil companies and 2) an analysis of some important questions posed by the creation of state oil companies. The choice of Brazil, Norway and Canada was not arbitrary. First, in each case, enough primary and secondary literature existed in English to permit thorough research. Second, after preliminary research, it became clear that all three countries are characterized by similar economic features and can be defined as 'semi-developed' or 'semi-peripheral'.[4]

Each chapter utilizes similar variables in order to analyze the individual cases in a way that reinforces the comparative nature of the thesis. First, there is a brief

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[4] Countries defined in this way have an established or growing industrial infrastructure that is dependent on international capital; consequently, the local capitalist class can be defined as 'weak' because it is dependent on international capital to develop industries usually requiring high levels of capital investment and technological expertise.

discussion of the political-economy of each country focusing on the nature of the national capitalist class, the extent of international capital investment and the historical role of the state. This has been done to outline the structure of the economies of Brazil, Norway and Canada in order to provide a foundation for our analysis. Second, there is an examination of national energy supply and consumption; in particular, the role of petroleum. This has been done to place our analysis of oil policy in perspective. The variables provide a foundation for a general analysis of the development of the various state oil companies in each country. Following this discussion, each chapter is constructed in similar chronological fashion. This has been done in order to trace the development of national priorities in oil policy which contributed to the decision to establish a state oil company and, following that decision, the company's subsequent development. In addition, within this examination, is an analysis of four specific features of the three state oil companies: their mandate, legal and financial structure and, their position in the government hierarchy. This has been done to analyze some of the issues posed by the creation of state oil companies. Finally, each chapter concludes with a brief assessment of the respective state oil companies. Preceding the case studies is a general discussion of the evolution of the international oil industry and the growing role of state oil companies. This chapter will examine the structure of the

industry. In addition, it will place in perspective our discussion of the evolving national priorities of Brazil, Norway and Canada regarding oil policy.

The State and the Oil Industry

As in the case of most natural resources, both the state and the oil industry find themselves in a bargaining position in the development of petroleum. In short, the state owns the resource but does not possess the required technology or expertise for development and is usually unwilling to invest public funds in high-risk ventures. The oil industry, however, possesses the necessary expertise and technology, is willing to raise the required capital, but does not own the resource.[5] Both actors, therefore, cannot operate without the other. Their different demands, goals, and perceptions place them in an "antagonistic relationship of interdependence".[6] The two key issues to be bargained over are the division of economic rent[7] and control over activity. The first determines the return to the oil industry on investments and the share to the government. The second provides both actors with the ability to plan. For the oil industry, this allows disposal of the resource on a long-term basis and provides for integration with other company activities. For the state, control over activity

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[5] Oystein Noreng, *The Oil Industry and Government Strategy in the North Sea*, London: Croom Helm (1980), 19.
[6] Ibid., 21.
[7] Economic rent is defined here as the revenue generated by the development of a resource after the cost of production and a 'normal' return on capital.

allows decision-makers to conform resource development to national priorities: blending the micro-economic realities of the oil industry with the macro-economic priorities of the state. The different priorities of the two actors often result in different attitudes towards the type and rate of development.[8]

Why Establish A State Oil Company?

The state is involved with the oil industry from the outset because in every country except the United States it is the owner of the subsoil resources. There are many forms of state participation which include: 1) carried interest arrangements 2) joint-ventures 3) service contracts and 4) net profit schemes. Advocates of state participation argue that: first, revenues to the state are increased; second, the state obtains direct control over activities; and, third, as the state increases its knowledge of the industry it is better able to manage the development of the resource.[9]

Critics of state participation analyze the issue of resource development almost solely from the angle of efficiency and argue that state participation is a cumbersome method to increase revenue or state control over

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[8] The attitude of the state and the private sector can be labelled a social rate time preference and a private rate time preference respectively. Much of the bargaining between the state and the private sector over the development of petroleum centres on the resolution of the two different rate time preferences.

[9] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 123.

the oil industry.[10] They argue that the state can maximize the benefits of resource development by competitive licencing systems (such as the auction method) and taxation; and that the market system guarantees the most efficient utilization of the resource over time. Moreover, they argue that the state can maintain control of resource development by carefully constructed legislation and law. If state participation assumes the form of a state oil company then additional arguments of efficiency, accountability and control are raised.[11] Confident of the market mechanism, critics claim that the money utilized on financing a state oil company should be allocated elsewhere. Consequently, many suggest that the resource becomes a tool for narrow-minded politicans more concerned with preserving their personal power than the national interest.[12]

This analysis, however, ignores how the structure of the oil industry can frustrate national priorities. As will be shown in detail in Chapter 2, the oil industry has tended to be vertically integrated; this has resulted in the domination of the industry by a few large multinational corporations. This fact undermines the main assumption of the critics of state participation that the international

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[10] Kenneth Dam, *Oil Resources: Who Gets What How?*, Chicago: University of Chicago Press (1976), 137 ff.; Colin Robinson and Jon Morgan, *Economic Consequences of Controlling the Depletion of North Sea Oil and Gas*, London: Trade Policy Research Centre (1976), 1-23.

[11] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 123.

[12] Dam, *Oil Resources*, 178-179; Robinson and Morgan, *Economic Consequences*, 22.

oil industry operates as a competitive market. The domination of the market by a few large, multinational firms undermines the ability of the state to bargain effectively over the division of economic rents and the pace of development. Thus, the state is forced to adopt a rate time preference established solely by a few international companies that have global options and priorities. Moreover, this structure results in high barriers to entry at every sector of the industry from exploration to retailing which usually locks out local capitalists. The structure of the oil industry, therefore, makes it virtually impossible to control short of direct intervention. In addition to the structure of the industry, the nature of the commodity fuels state interest in oil policy. The economic rent generated by oil production is often far in excess of 'normal profits'.[13] How economic rent is divided and reinvested has a critical effect on the development of the oil producing country. This has been exacerbated by the forces behind oil pricing particularly since 1973. As noted, the structure of the industry undermines assumptions that the 'market method' determines prices in the international oil system. In addition, the importance of oil has introduced a variety of political forces behind the establishment of oil prices.[14] These facts challenge arguments that the oil industry should

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[13] Petter Nore, "Oil and Contemporary Capitalism", (eds.) Francis Green and Petter Nore, *Issues in Political Economy: A Critical Approach*, London: The Macmillan Press (1979), 94-95.
[14] Ibid., 101.

be developed solely by the private sector. In addition, oil remains a key energy source for fueling today's modern economies. In the less developed world the attempt to industrialize has resulted in a growing dependence on petroleum products.[15] Finally, the exploration and development of oil raises some serious ecological and environmental problems particularly in areas such as the North Sea or the Canadian Arctic.

In theory, state participation through state oil companies allows the state to strengthen its bargaining position because the monopoly over development held by the private sector is broken. Critics of state participation often ignore the way that direct state involvement can strengthen the hand of government in the bargaining process over economic rent and the pace of development. It is clear that governments place great emphasis on control and learning as a prerequisite for control and planning.[16] The state views itself as more than a simple 'landowner' with a mandate much broader and more important than simply capturing economic rent from the exploitation of a resource. State participation reflects the host of political pressures that 'superimpose' themselves on government oil policy.[17] Therefore, in theory, direct participation increases the

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[15] Brazil is the most obvious example of a country which has sparked national industrial growth by promoting the use of locally produced automobiles: this has produced an alarming dependency on oil, most of which is imported.

[16] Noreng, *The Oil Industry and Government Strategy*, 123.

[17] Ibid.

ability of the state to manage the development of resources according to a social rate of time preference and as a result, accomplish national priorities. This argument explains the rationale for both state participation and for establishing a state oil company (which is only a more direct form of state participation).

Efficiency, Accountability and Control

While dismissing theoretical criticisms of state participation, it is not as simple to address the equally serious problems of efficiency, accountability and control that are raised by critics, particularly in light of the history of a variety of state oil companies. Although the intervention of the state into the oil industry may be justified to achieve national priorities, it does not answer the serious charge that state oil companies are inefficient and unaccountable to government. There are some obstacles to assessing public corporations because they lie somewhere between private companies and an instrument of public policy. Establishing criteria to judge or evaluate the performance of a public corporation, therefore, is difficult. For example, one critic might argue that a public corporation should be judged in comparison with its private counterparts. On the surface this may appear as a fair yardstick for measuring efficiency; yet, suppose it was government policy that the public corporation utilize local goods and services that were not competitive with similar imported products? There is, therefore, an obvious problem.

One method of judging is to analyze the company's mandate and response to new initiatives. Usually, each new public corporation has a mandate to perform in a particular fashion in order to achieve particular goals. This method in itself, however, is probably not satisfactory. Following the case studies, the concluding chapter will examine this problem in further detail.[18]

In addition to efficiency, questions of accountability and control are critical issues that will be examined in this study. As an oil company, a state oil company shares many of the same characteristics of a private international firm. Thus, a state oil company may become as impregnable to government scrutiny as a private firm and consequently, unmanageable. Moreover, the state oil company performs the function of an intermediary as most information obtained from direct participation must first pass through the state oil company.[19] This crucial position provides it with an important screening role which, of course, could be used deliberately to control certain information flows. Such a strategic role provides a state oil company with an advantage over both the government it is supposed to serve

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[18] It should be noted that critics of state oil companies often point out that public funds could be better spent by the state in other sectors. However, this is more a criticism of the function of the state in general than question of state participation in particular. Whether or not the state should be directly involved in a resource industry is a topic for another study although some of the advantages and disadvantages of state participation will be discussed.

[19] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 144.

and the businesses with which it competes! Thus, there is a real risk that authority will transfer from the government to the state oil company reducing the former to a rubber stamping role for decisions already made by the latter.[20] The problem is further complicated by the risk of undermining the dynamism of a public corporation with too much controlling legislation.[21] An effective company should have some room for independent decision-making. Studies have shown, however, that public corporations have considerable freedom of action compared to their private counterparts. The controls usually exercised by private owners are not always replaced by similar supervision by the state. Obviously, the question arises whether the state oil corporation will serve the interests of the state or vice-versa. Governments, therefore, face a difficult problem of dualism when establishing a state corporation: how to strike the balance between the 'public' and 'private' side of the corporation in order to make it an efficient tool of public policy.

There appear to be two "single steering mechanisms"[22] that a government may choose from in order to address the problem of accountability and control. The first method, government financial control over public corporations, reduces the ability of the company to operate financially

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[20] Ibid., 145-146.
[21] Ibid., 146.
[22] Ibid., 146.

independent of the government.[23] The second method integrates the public corporation into the system of government planning by placing the company within a direct chain of government authority. Consequently, the government can establish goals that are broader than the narrow policy horizon of most public corporations.[24]

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[23] Ibid., 147.
[24] Ibid., 146.

II. STATE OIL COMPANIES AND THE INTERNATIONAL OIL SYSTEM

The International Oil System

From the early years three basic features have characterized the international oil system: the system of petroleum concessions held by the majors, the cooperation among them in order to control the industry and, the rise of state oil companies. The oil concessions in the Middle East were a product of colonial rule. Following World War I, the British and French were the dominant powers in the Middle East and only following substantial American government pressure were American oil companies allowed to enter the area.[25] The major MNCs had the political, and, in some cases, the financial[26] support of their home governments in the search for oil because of the commodity's unusual importance in national security and economic development. They brought their technological and managerial skills to the Middle East to negotiate with local elites. These elites, however, had little idea of the importance of the petroleum resources which were to be found in such abundance. The concession system made the major MNCs "the sole arbiter of the volume and nature of capital investment ... the choice areas for exploitation, the determination of exploration plans, the development of oilfields, the

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[25]Benjamin Shwadran, *The Middle East, Oil and the Great Powers* (third edition), Jerusalem: Israel Universities Press (1973); see: Shwadran's discussion of the Turkish Petroleum Company, 195-209.

[26]For example, the British government's majority interest in British Petroleum and the United States inclusion of Saudi Arabia in the lend-lease agreement during World War II.

production levels, the size of the necessary production facilities, and exploration and transportation capacities".[27] In short, the concession system gave a few large MNCs the exclusive right to develop the oil industry in almost any fashion they pleased within the countries in which they operated. This amounted to direct transfer of sovereignty over the petroleum resources for the duration of the concession agreement. It is not surprising, therefore, that the MNCs, backed by their home governments, steadfastly held to the sanctity of contract as a principle which could never be violated.[28]

Coupled with the concession system was the cooperation among the majors in controlling the international oil industry. The history of the International Petroleum Cartel has been documented in several studies and there is little point repeating that process here.[29] Nevertheless, it is necessary to analyze the main features of the oil monopoly particularly as they illustrate the former structure of the international oil system and the critical points of control.[30]

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[27]Fadhil al-Chalabi, *OPEC and the International Oil Industry: A Changing Structure*, London: Oxford University Press (1980), 9.

[28]Shwadran, *The Middle East, Oil and the Great Powers*, 116-120.

[29]Ibid.; Anthony Sampson, *The Seven Sisters: The Great Oil Companies and the World They Made*, Toronto: Hodder and Stoughton (1975); John Blair, *The Control of Oil*. New York: Pantheon Books (1976); Peter Odell, *Oil and World Power* (fifth edition), London: Penguin Books (1980).

[30]The various stages in the exploration, transportation, marketing and refining of crude oil results in key points of control in the industry. This lesson was not lost on John

[30] The majors developed the international oil system to strengthen both vertical and horizontal linkages. Horizontally, the majors secured joint arrangements for entry into the oil producing regions of the world through consortia. This gave them a virtual monopoly over crude oil production. Vertically, each of the majors had its own control over transportation, refining and marketing (downstream operations). Vertical integration gave the majors control over every aspect of the industry from production of crude oil to the distribution of the refined product to the eventual customer.[31] Thus, most of the world's oil moved within the majors' tightly controlled channels.

The nature of the concession system and the monopoly enjoyed by the majors was challenged in many of the oil producing and consuming countries as early as 1912.[32] In 1918, Russia became the first country to nationalize an existing oil industry. As will be discussed in the case study on Brazil, the Latin American countries pioneered the struggle against the concession regime by the formation of

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[30](cont'd)Rockerfeller who controlled refining and transportation in the United States at the turn of the century and, consequently, controlled the industry.

[31]al-Chalabi, *OPEC and the International Oil Industry*, 10-11.

[32]Carl Solberg, *Oil and Nationalism in Argentina: A History*, Stanford, California: Stanford University Press (1979), 10-12; Pinelo, *The MNC as a Force in Latin American Politics: A Case Study of the IPC in Peru*, New York: Praeger Publishers (1973), 3-30.

national petroleum councils and/or state oil companies.[33] The struggle between the oil producing countries of the Middle East and the majors began almost as concessions were granted.[34]

The first major challenge to the concession system and the monopoly of the majors in the Middle East was the attempt at nationalization made by the Mossadegh government in Iran between 1951 and 1953. The Iranian threat of nationalization *without* compensation radically challenged the structure of the international oil system because of the apparent repudiation of the sanctity of contract principle. The majors, and their home governments, feared the spread of state ownershp to other oil producing countries.[35] In response to Iran's unilateral nationalization, British Petroleum halted production in Iran and, with the support of the other major oil companies, a boycott was instituted against Iranian oil. As Table 2.1 illustrates, the stoppage of Iranian oil had no impact outside of Iran because the majors simply increased production in other oil producing countries, principally in Saudi Arabia and Kuwait.

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[33]Hasan Zakariya, "State Petroleum Companies", *Journal of World Trade Law* 12(6)1978, 484.
[34]Benjamin Shwadran, *Middle East Oil: Issues and Problems*, Cambridge, Mass.: Schenkman Publishing Company (1977), 3.
[35]Joe Stork, *Middle East Oil and the Energy Crisis*, New York: Monthly Review Press (1975), 52.

Table 2.1 - Oil Production in Iran, Saudi Arabia, Kuwait and Total Middle East: 1950-1955

Year Oil Production (millions of tons)

Year	Iran	Saudi Arabia	Kuwait	Middle East
1950	31,750	25,900	17,000	86,600
1951	16,720	36,900	27,800	96,190
1952	? 750	41,000	37,100	104,440
1953	? 750	40,880	42,600	121,620
1954	3,000	46,130	46,900	136,000
1955	15,950	46,780	53,900	162,468

Source: Stephen Longrigg, *Oil in the Middle East: Its Discovery and Development*, 478.

The majors were backed by strong cooperation between London and Washington. The United States applied effective diplomatic pressure to strengthen the majors' position and by 1953, Washington was withholding all financial aid to Iran. Both the British and American governments decided that the deterioration of economic conditions in Iran would eventually force Mossadegh out of office.[36] In August 1953 Mossadegh was swept from power and replaced by the Shah.

The solution to the problems created by the nationalization of Anglo-Iranian reflected the monopoly power of the majors and the relative strength of the United States. A consortium was formed made up from the seven major oil companies, the French state oil company and a five per cent share for nine American independent oil companies. Washington was able to pressure Britain into giving the American-based companies a 40 per cent share in the consortium where previously they had had no part. In theory, the entire petroleum industry in Iran became the property of the National Iranian Oil Company (NIOC) but it was merely a face-saving gesture to pacify nationalist passions. The Consortium solution allowed for the re-introduction of Iranian crude oil into the world market while at the same time protecting the whole concession structure in the Middle East.[37]

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[36] Shwadran, *The Middle East, Oil and the Great Powers*, 120.
[37] Ibid., 142-145, 157: Not to mention the fabulous compensation terms obtained by the Anglo-Iranian Oil Company. It was clear to every oil producing country that nationalization at that time only invited disaster. The

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As one commentator summarized, "the formation of the Iranian Consortium marked in some respects the apogee of the influence of the seven sisters."[38] The majors had solidified their control over production and reinforced the horizontal linkages in the industry in the face of the most critical challenge to their role in the Middle East. It was clear that the oil producing countries lacked the majors' technological and managerial skills, as well as access to the necessary markets, to make their own way into the tightly controlled international oil system. In addition, the majors were blessed with the full diplomatic support of their home governments. The result of the events in Iran, however, foreshadowed developments in the international oil system which would eventually contribute to the disintegration of the majors' hegemony. The formation of NIOC as the first state oil company in the Middle East "led to the widespread dissemination of the concepts of full control by the state over its oil operations, by government takeover (nationalization by legislation) or by mutual

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[37](cont'd)reluctance of the Middle Eastern oil producing countries to nationalize their industries up until 1973 can best be understood by the lessons of the attempt by the Mossadegh government, see: Ahmad Yamani, "Participation versus Nationalization: A Better Means to Survive", *Continuity and Change in the World Oil Industry*, (eds.) Zuhayr Mikdashi, Sherril Cleland and Ian Seymour, Beirut: The Middle East Research and Publishing Centre (1970), 211-233.
[38]Sampson, *The Seven Sisters*, 137.

agreement with the companies."[39] Tracing this and other developments is the subject of the next section.

The Independents, State Oil Companies and OPEC

The erosion of the majors' position was facilitated by the introduction of independent oil companies which operated outside of the former's oligopolistic control. The end of the fifties saw the rise of state oil companies in some of the oil consuming countries. This was a result of the latter's interest in securing 'cheap' supplies outside the majors' control. The critical importance of oil for economic development, coupled with the strain that oil imports put on the balance of payments (oil was paid for in American dollars and to a lesser extent in pounds sterling), pushed governments in many consuming countries to become directly involved in the industry. The architect of one of these state oil companies was Enrico Mattei, president of the Italian state oil company Ente Nazionale Idrocarburi(ENI).[40] Mattei popularized the notion of the seven sisters --'le sette sorelle'-- to describe the dominance of the seven major oil companies.[41] Mattei, whose dislike of the seven sisters was rooted in their refusal to allow ENI a share in

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[39]al-Chalabi, *OPEC and the International Oil Industry*, 16.
[40]For accounts of the history of ENI under Mattei, see: Paul Frankel, *Mattei: Oil and Power Politics*, New York: Praeger Publishers (1966); Dow Votaw, *The Six-Legged Dog: Mattei and ENI A Study in Power*, Berkeley, California: University of California Press (1964).
[41]Sampson, *The Seven Sisters*, 147-148.

the Iranian Consortium agreement of 1954,[42] challenged the hegemony of the majors first in Italy and then in Iran.

At the same time, the American income tax system was revised in 1955 to encourage American based oil companies to explore for oil outside of the United States. Pressure from Congress had forced the majors to include in the Iranian Consortium nine American independents. This provided the latter with the advantage necessary to acquire knowledge for successful operations in the Middle East. As Raymond Vernon summarized, "[f]rom that moment on, a dozen or so independent companies leaped the heretofore difficult entry barriers of the international oil market, appearing as crude oil producers in Libya, Algeria, and various countries of the Middle East."[43]

Following 1955 there was a growing trend in the oil producing countries towards the establishment and development of state oil companies. In Iran, NIOC was allowed access to all the technical data of the companies in the Consortium. This expanded its role in overseeing the functioning of the oil industry and provided it with a

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[42]Votaw, *The Six-Legged Dog*, 18-19: Mattei had refused to buy discounted oil from Iran during the period of dispute and expected a share in the Consortium as a reward from the majors. Their "humiliating and shameful" (Ibid., 18.) rejection pushed Mattei to use ENI to work outside of the control of the majors.

[43]Raymond Vernon, "An Interpretation", *The Oil Crisis*, (ed.) Raymond Vernon, New York: W.W. Norton and Company Inc. (1976), 4.

wealth of knowledge critical to future operations.[44] NIOC's role as an information gathering agency was coupled with responsibilities for all non-basic functions such as housing, medical care, public transportation and industrial training. Admittedly, its role was not essential to the functioning of the Iranian oil industry, however, it was the first step in a long process of establishing the domestic capabilities for operating the industry.

In 1957, the Majlis (Parliament) enacted a new petroleum law giving NIOC broad powers to expand exploration and development of oil resources outside of the lands controlled by the Consortium.[45] The manner in which NIOC instituted its mandate reflected the new conditions emerging in the international oil system by the end of the fifties. A few weeks after the new law was enacted, NIOC entered into a joint-venture with ENI. ENI agreed to pay for all exploration costs and, if oil was discovered, to split profits at the upstream phase roughly 75-25 in favour of NIOC instead of the customary 50-50 arrangement. Eventually NIOC signed six joint-ventures contracts: three with state oil companies, two with American independents and one with a major oil company (Shell).

The opening of new fields in North Africa also reflected the new influences in the international oil

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[44] Fariborz Ghadar, *The Evolution of OPEC Stategy*, Lexington, Mass.: Lexington Books (1977), 69-80.
[45] In particular for its refining, transportation and marketing both domestically and internationally.

system. In Libya, the state was anxious to avoid domination by the majors and granted concessions to a variety of independents. In fact, Libya granted 51 concessions to 21 different companies.[46] The independents offered better terms for concessions in North Africa and relinquished lands in the Middle East. They had little to lose by offering more attractive terms because they had no substantial stake in other countries. The majors' policy of uniformity represented a key disadvantage in bargaining against the independents.

The structural changes at the upstream phase resulted in many developments by 1960 which would shape the international oil system for the next decade. The introduction of new investment patterns in the international oil system resulted in free exchanges of buying and selling of crude oil outside of the majors' vertically integrated channels. This diminished the effectiveness of their horizontal linkages and put great downward pressures on the price of oil. The majors and independents simply produced more oil than the market could absorb. This problem was exacerbated in 1959 with the introduction of mandatory import quotas by the United States to protect the American domestic market from cheap imports. Consequently, the companies turned to Europe and Japan to sell their unwanted commodity. The downward pressure on the price of oil was

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[46]Loring Allen, *OPEC Oil*, Cambridge, Mass.: Oelgeschlager, Gunn and Hain Publishers Inc. (1979), 25.

further accelerated with the introduction of Soviet oil into the European market.[47]

The downward pressure on price put similar pressure on profits. With the glut in the market the majors began to discount their crude as the spread between the posted and the market price widened. In February 1959 and August 1960 this cost was simply passed to the producing countries. The majors unilaterally cut the posted price and thus, reduced the revenues of the producing countries. While the majors' decision was protested, the producing countries were impotent to stop the cuts.

In quantitative terms the introduction of the free market does not appear significant because it never exceeded more than 10 per cent of the volume traded. Yet, the free market hinted at growing structural pressures which limited the majors' control. This also applies to the growth of state oil companies in the Middle East which, while very slow, foreshadowed developments.

In order to understand events following 1970 three trends must be traced: first, the continued expansion of state oil companies; second, the establishment of the Organization of Petroleum Exporting Countries (OPEC); and third, the rapid increase in oil consumption by the developed countries.

The majors still retained power through control of technological, financial, managerial and marketing

[47]Odell, *Oil and World Power*, 54-55.

capabilities. This fact pushed many of the producing countries to adopt national strategies for control of the oil industry through state oil companies. Events in Iraq, the growth of NIOC, and the participation debate inspired by Saudi Arabian oil Minister Yamani, led this trend.

In 1961 Iraq expropriated 99.5 per cent of the concession land of the Iraq Petroleum Company (IPC). The negotiated or forced relinquishment of concession land was a key step in introducing state oil companies into the domestic oil industry. Iraq gave the recovered lands to the Ministry of Oil and Minerals, which in concert with the Iraqi National Oil Company (INOC) formed in 1964, moved to develop the new fields. The lack of skilled personnel, domestic technology and financial capacity, however, rendered INOC helpless until it received substantial Soviet assistance.

In contrast to INOC was the steady growth of NIOC. NIOC began as early as 1957 to develop its own integrated domestic market, and brought its own refineries on stream in 1963 (Alborz) and 1969 (Tehran) to satisfy domestic demand. NIOC began to pursue associated natural gas developments in 1957. In 1961 a pipeline was constructed for local industrial development[48] and in 1966 the National Iranian Gas Company was established. In 1970 the Iranian Gas Trunkline became operational and natural gas was exported to

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[48]Shwadran, *The Middle East, Oil and the Great Powers*, 175.

the Soviet Union.[49] NIOC incorporated the National Iranian Petrochemical Company in 1963 to spearhead developments for four petrochemical plants. All the products were for the domestic market. In order to facilitate marketing, NIOC established the National Iranian Tanker Company. NIOC had the advantage of a large domestic market which it serviced exclusively, and thus gained the necessary technological and managerial skills to operate the oil industry. At the same time its operations generated substantial revenues for further reinvestment.[50]

The establishment of state oil companies in the producing countries and their gradual entry into the international oil system was the first step towards their ability to learn and master the industry. Producing state oil companies were first confined to servicing local requirements. The second step in this long process was their introduction into the international operations of the various foreign owned oil companies (majors and independents) at the upstream phase. One method was a process called participation popularized by Saudi Arabian oil minister Yamani.[51] Participation is defined as state company partnership with a private oil company in which ownership, control, and profits are shared. It is critical, however, to distinguish between coercive takeovers without

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[49]Ibid., 176.
[50]In 1964 NIOC became independent of government subsidies and was able to operate on its internal cash flow.
[51]Yamani, "Participation versus Nationalization", 211-233.

compensation and the moderate participation approach advocated by Yamani. In many respects the latter was designed to stabilize the position of the offtaking company.

The June 1967 Arab-Israeli War resulted in the call for nationalization of the oil industry operating in the Arab Middle East. Yamani offered participation as an alternative because it was the only way "to safeguard the security of our future income from oil".[52] He also contended that because of a surplus, the majors were required to manage supplies. According to Yamani, participation guaranteed the gradual growth of state oil companies and, at the same time, reduced the risk of a government gaining control of an industry that it could not operate. Thus, his contention was, that "the main objective ... is to gain know-how rather than to increase revenue."[53] Notwithstanding Yamani's claims the majors steadfastly refused to negotiate with the oil producing countries. The companies understood that participation threatened their profit margin and would remove their unilateral control over production.

OPEC was formed on 14 September 1960 by Venezuela, Iran, Iraq, Kuwait and Saudi Arabia[54] in direct response to the unilateral reduction in the price. OPEC was unable to achieve its chief goal during the sixties which was "to

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[52]Ibid., 217.

[53]Shwadran, *Middle East Oil: Issues and Problems*, 63.

[54]OPEC membership was later expanded to include: Qatar (1961), Indonesia (1962), Libya (1962), Abu Dhabi (1967), Algeria (1969), Nigeria (1971), Ecuador (1975) and Gabon (1975).

restore present prices to the levels prevailing before the reduction".[55] Nevertheless, most scholars agree that OPEC was able to stop further reductions[56] and achieve some changes which increased their revenue while contributing to price stability. OPEC's limited gains illustrates the changing structure of the international oil system during the sixties.

By the end of the decade a critical change in market conditions became evident. As can be seen from Table 2.2, the role of oil as a percentage in the overall energy consumption of the United States, Western Europe and Japan increased dramatically by 1970. This was matched by a dramatic increase in oil imports by Western Europe and Japan, and an important increase by the United States as indicated by Table 2.3. Significantly, these imports came increasingly from the Middle East and North Africa. The peaking of domestic production in the United States in 1970 resulted in the slackening and eventual removal of the oil import quotas. This introduced the United States into the free market as a buyer of substantial quantities of Middle Eastern and North African oil. Thus, the developed countries had become dependent on oil imports from the Middle East and North Africa. The stage was set for the dramatic changes

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[55]Unanimous resolution at the first OPEC conference in Bagdad: cited in: Allen, *OPEC Oil*, 51.
[56]Ibid., 54-55; Edith Penrose, "OPEC's Importance in the World Oil Industry", *International Affairs* 55(1)1979, 19; Sampson, *The Seven Sisters*, 163; al-Chalabi, *OPEC and the International Oil Industry*, 67.

between 1970-1973.

Table 2.2: Consumption of Oil and Coal in the the United States, Western Europe and Japan - 1950 & 1970

Country	1950			%	1970		
	oil	coal	other		oil	coal	other
United States	39.5	37.8	23.1		43.7	18.3	38.1
Western Europe	14.3	77.4	8.3		68.8	27.4	16.0
Japan	5.0	61.9	33.1		68.8	22.4	8.8

Source: Joel Darnstadter and Hans Lansberg, "The Economic Background", *The Oil Crisis*, (ed.) Raymond Vernon, New York: W.W. Norton Books (1976), 20.

Table 2.3: World Consumption and Imports by the United States, Western Europe and Japan: 1967 & 1976

Country	Oil Consumption (millions of tons)	Shares in World Oil Consumption %	Middle Eastern * as percentage of consumption
U.S.A.			
1967	595.8	33.7	2.1
1976	822.4	28.6	16.8
W.Europe			
1967	458.1	25.9	74.3
1976	706.4	24.5	77.4
Japan			
1967	122.9	6.9	83.0
1976	253.8	8.8	78.2

Source: *British Petroleum Statistical Review of the World Oil Industry*, London: B.P. 1967 and 1977 issues.

*includes North Africa

From Libya to the October Boycott: 1970-1973

The success of Libyan demands in 1970 demonstrated the changes in the international oil system which we traced throughout the sixties. As one commentator summarized, Libya's success was "like a flash of lightning in a summer sky."[57] As noted earlier, Libya, entering the ranks of oil producing states in the late fifties, encouraged the role of independents. In 1970 independents produced 55 per cent of Libyan oil compared to 15 per cent for all OPEC countries.[58] Oil production in Libya had grown dramatically for a variety of reasons and with a small population and little industrial growth, Libya had substantial surplus reserves.

In September 1969 the constitutional monarchy of King Idris was overthrown by a group of Libyan army officers. The new regime moved quickly to raise the posted price of Libyan crude. In January 1970 Libya demanded a number of adjustments of which a price increase of 40 cents a barrel was the most significant. Libya's main target was an independent, the Occidental Petroleum Company. Occidental was completely dependent on Libya for its crude oil supply and the Libyan government exploited this by legislating progressive cutbacks in production. Libya's squeeze on Occidental was aided by a tanker shortage which left the majors unable to make up production cutbacks. In September 1970 Occidental agreed to a 30 per cent increase per barrel.

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[57] James Akins, "The Oil Crisis: This Time The Wolf is Here", *Foreign Affairs* 51(3)1973, 471.
[58] Blair, *The Control of Oil*, 212.

Within one month every foreign company operating in Libya accepted the terms.[59] This started a chain reaction throughout the Persian Gulf. In early 1971 the Tehran and Tripoli Agreements were signed in which both prices and the producer's share of profits were increased, the latter to 55 per cent.

The rise in oil prices and the new profit sharing agreement were impressive victories for the oil producing countries. It is clear that the evolving structure of the international oil system accounted for many of the changes by 1971. It is important to note, however, that divisions between the oil consuming countries were an important factor in the outcome.[60] Moreover, while the new developments represented a loss in the majors' unilateral decision-making power they had little to lose with rational price increases provided they were uniformly applied to all their rivals and could be passed on to consumers. The increase in prices more than made up the difference lost in increasing the oil producer's split of profits to 55 per cent.

At this point it is necessary to examine the participation agreement of 1972. Following the successes of 1970, the oil producing countries pressed for increased participation. At the twenty-fourth OPEC conference in Vienna the decision was made to demand state participation.

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[59] Shwadran, *Middle East Oil: Issues and Problems*, 13.
[60] For a discussion, see: Shwadran, *Middle East Oil: Issues and Problems*, 18; V.H. Oppenheim, "(Why Oil Prices Go Up)The Past: We Pushed Them", *Foreign Policy* 25(1977), 24-57.

By late 1972 all the Persian Gulf states, with the exception of Iraq and Iran, had reached an agreement with the majors for 25 per cent participation. This was to commence on 1 January 1973 and increase to a level of 51 per cent by 1983. A key feature of this participation agreement was the method in which the state oil companies would market their newly acquired equity crude. The state oil companies negotiated a buy-back price with the majors for 93 per cent of the posted price. This insured the oil exporting countries a market for their equity crude but strengthened the position of the majors since they were guaranteed crude oil supplies. While the participation agreement soon fell by the wayside, buy-back contracts remained a key feature of the international oil system until 1979. Finally, in Iran in 1973, the Consortium signed a new agreement with NIOC which made it primarily a sales agent for Iranian crude. This foreshadowed later developments in Saudi Arabia, Kuwait and Bahrain.

The bi-lateral pattern of price negotiations broke down under stresses caused by new market conditions and political pressures in the Persian Gulf. By the middle of 1973 realized market prices were surpassing the posted price. The Middle East oil producers demanded a new agreement because rising inflation and successive devaluations of the American dollar were rapidly reducing the real price of oil. On 16 October, breaking all tradition, OPEC unilaterally announced a 70 per cent increase in the posted price to \$5.12 for a

barrel of Arabian Light. In addition, in the midst of a Middle East war many of the oil producing states instituted output and destination restrictions in support of the Eygptian and Syrian effort against Israel. This triggered panic buying.[61] In December 1973 OPEC announced an increase to $11.65.

In addition to the reasons that help explain developments by 1973, two other factors must be noted. First, there was the perception of OPEC as a monolithic power bloc which was, by complete control of prices, production and destination of crude oil, holding the developed world 'over a barrel'. Second, there was a growing concern in the oil consuming countries that the world was soon to run out of oil.[62] These two factors coupled with the reality of power relationships in the international oil system elevated the oil producing countries into the dominant position by the close of 1973. Some speculated whether the major oil companies would survive,[63] possibly to be replaced by state oil companies. Others predicted the effect of the producers' economic surpluses.[64] As one Arab spokesman concluded, the future could be made "according to

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[61]For example, some oil from Iran and Nigeria was auctioned off as high as $17 to $20 per barrel!
[62]Odell, *Oil and World Power*, 216-217.
[63]Louis Turner, "Will The Oil Companies Survive?", *Oil Companies in the International System*, London: George Allen and Unwin Ltd. (1978), 200-222.
[64]Shwadran, "Surpluses and Recycling", *Middle East Oil: Issues and Problems*, 101-113.

our wishes".[65]

Although by late 1973 the old concession system had been dismantled much of the hysteria regarding the new developments was misplaced. First, the marketing schemes devised with a majority of the producing country state oil companies featured long-term contracts with the majors. This effectively kept most of the crude oil flowing through the latter's integrated channels. Second, the massive industrial schemes planned in virtually every oil producing country relied on Western technology. These countries, therefore, slowly became incorporated into the global capitalist system. Moreover, the investments of substantial surplus revenues in the Western economies gave the producers a vested interest in preserving the health of the global capitalist system. Thus, while OPEC seemed to threaten the developed world, events following 1973 would prove how wrong was that assessment.

Wasted Years? 1974-1981

The oil producing countries quickly increased state participation levels to 100 per cent. By 1975 Saudi Arabia, Kuwait, Bahrain, and Qatar obtained significant control of the assets of the foreign oil companies. The majors, however, agreed to continue to operate some of the local industry. One development which had great impact was the rush of the producing countries to industrialize by

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[65] *Middle East Economic Survey* (MEES) 17(11 October 1974), 19 (ii).

establishing enormous downstream development projects. In brief, the producing countries hoped to establish forward and backward linkages. The scale of these projects and the conviction that the backward economies of the oil producing countries could be transformed overnight are both striking features of this trend.[66] The fate of these projects, however, revealed the weaknesses of the producing countries and the relative strengths of the majors and the OECD countries. First, the high price of oil resulted in steadily decreasing demand and drop in consumption of 12 per cent by 1975.[67] This reduced the expected revenues of the producers and, destabilized development plans. Second, changing market conditions put inceasing pressure on OPEC unity which ultimately resulted in two-tier pricing. Third, inflation in the OECD countries was reflected in enormous increases in the cost of the producers' development programmes. They were trapped into importing expensive personnel and products from the OECD countries. Finally, the increase in the price of oil made exploration in areas outside of the OPEC countries economically feasible, potentially threatening OPEC's control over the market.

The complacency with which most oil consuming countries dealt with the problem of security of supply, particularly in North America, left policy-makers helpless following the Iranian Revolution. The effect of production stoppages in

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[66]See, *MEES* 18(12 December 1975), 1.
[67]Allen, *OPEC Oil*, 93.

Iran accelerated the marketing of crude oil by state oil companies, previously delayed by buy-back contracts.[68] 'Safe' crude supplies virtually disappeared with the effects of the Iranian Revolution.[69]

The four indicators of growing state involvement are: 1) figures on crude oil available on long term contracts 2) third party sales by the majors 3) trading on the spot market and, 4) government-to-government arrangements. As Table 2.4 illustrates, long term contracts only accounted for 42 per cent of all crude traded internationally at the end of 1979, a sharp fall from 90 per cent in 1973. Third party sales have been gradually phased out since 1977, and for 1980 have been estimated at 1 million barrels daily.[70] The spot market reflected the thin market as the gap widened between official (OPEC) and realized market prices. Even with great increases in production by many of the OPEC countries it took nearly 18 months for the gap to close.[71] Finally, as Table 2.5 illustrates, government-to-government arrangements for crude oil increased dramatically to a level of 6.8 - 7.8 million barrels daily, approximately one sixth of the world's trade. Thus, following the Iranian Revolution, the vertical structure of the international oil

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[68]"Control of Crude Oil Supplies", *Petroleum Economist* 46(9)September 1979, 350-351.
[69]Jochen Mohnfeld, "World Oil Markets: Changing Patterns of Trade", *Petroleum Economist* 47(8)August 1980, 330.
[70]It was reported in May 1980 that British Petroleum had withdrawn from its traditional role as a wholesaler of crude oil: "Oil Companies: The Majors in Transition", *Petroleum Economist* 47(5)May 1980, 191.
[71]Mohnfeld, "Changing Patterns of Trade", 330.

system had virtually disintegrated. These developments, coupled with the end of horizontal linkages following 1973, reflect the evolving structure of the international oil system.

Table 2.4: Crude Oil Available to the Majors on Long Term Contracts

(million b/d)(a)

	1973	1978	1979	1980
Total Available	30.0	21.3	19.5	17.7
Outside OECD	25.0	16.9	14.5	12.5
Share in International Trade(c)	90 %	50 %	42 %	?
Third Party Sales	6-7	3.7	1.5	0.9

(a)all figures are estimates

(b)trend in second quarter

(c)outside COMECON and China

Source: *Petroleum Economist* 47(8)1980, 329.

Table 2.5: State-to-State Trading

By Importing Region(a)

(millions b/d)

	1973	1978	1979	1980(est.)
Total	1.0	3.8	5.8	6.8-7.8
of which exports				
to Japan	n/a	1.0	1.5	----
to Europe	n/a	1.6	2.5	----
to LDCs	n/a	1.3	1.8	----

(a)outside of the centrally planned economies

Source: *Petroleum Economist* 47(8)1980, 330.

Summary and Conclusions

As the major actors in the international oil system enter the eighties their relative positions reflect the restructuring of the industry. The producing countries control prices, production, and marketing of crude oil through their state oil companies' operation of the upstream phase of the industry. The majors have lost control of upstream operations. They seek to retain access to crude oil supplies and hold their market shares in the downstream phase. For three reasons in the short and medium term the majors will remain in a strong position: first, the majors' logistical advantage over state oil companies because of their ability to market many different types of oil; second, their technological monopoly; and finally, their political support by Washington.[72]

The oil industry is characterized by extensive state involvement through state corporations in virtually every oil producing and consuming country with the exceptions of the United States, Germany, Australia and some others. The role of state oil companies in the international oil system will play an increasing role in the next decade. A key indicator is the increase in state-to-state trading. The degree to which public and private capital are in competition or alliance will do much to shape the structure

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[72] Petter Nore, "The International Oil Industry and National Economic Development", *The Nationalization of Multinationals in Peripheral Economies*, (ed.) Julio Faundez and Sol Piccotto, London: Macmillan Press (1978), 196.

of the international oil system. What remains to be seen is whether or not state oil companies will move into downstream operations, something which would represent a fundamental threat to the majors.[73] It might be argued that, if the producing countries demand downsteam participation, the state oil companies of the consuming countries might replace the majors as bearers of technology in return for a secure supply of crude oil. The key change in the international oil system to date is the growing role for state oil companies in both the producing and consuming countries.

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[73]Ibid., 200-206.

III. PETROBRAS

The Political Economy of Brazil

A large, conservative land-owning class dominated Brazilian politics until the late 1930's. This produced counter-forces which account for two key political traditions: centralization of political and economic power at the federal level, and the growth of the military into the dominant actor in the country.[74] The revolution of 3 October 1930 established a strong national government. The role of the military in the revolution instituted the Army as the key to office for every government following 1930. The military has played a key role in formulating state policy and since the *coup d'etat* in 1964 has directed Brazilian political, economic, and social development.

Until 1945, the Brazilian economy relied almost solely on coffee and sugar exports. Brazil experienced an important period of industrialization during the thirties and the years following 1945. Local capital in Brazil is located primarily in industries characterized by small businesses in which the amount of investment per worker is often the lowest.[75] This reflects the historical weakness of the Brazilian bourgeoisie.[76]

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[74] Robert Daland, *Brazilian Planning in Development, Politics and Administration*, North Carolina: The University of North Carolina Press (1967), 14-15.
[75] Peter Evans, *Dependent Development: The Alliance of Multinational, State and Local Capital in Brazil*, Princeton, New Jersey: Princeton University Press (1979), 116-119.
[76] Evans concludes that it is incorrect to view the Brazilian bourgeoisie as victims of development in Brazil since a high proportion of the value produced in industry comes out of

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International capital has played a dominant role in the Brazilian economy concentrating in industries which are dependent on high levels of capital investment and technological expertise.[77] By 1975, 80 of Brazil's largest non-state enterprises were subsidiaries of multinational corporations.[78]

The Brazilian state has played a strong interventionist role in the economy beginning in the 1930's when government steel mills were constructed[79] and, institutes for coffee, sugar, fishing and petroleum were established. In 1975 it was calculated that the Brazilian state held 23 per cent of the total assets of the largest 2,500 companies in Brazil.[80] It seems that the state became the alternative to international capital in areas where national accumulation was viewed as essential.[81] It is useful to label the Brazilian economy as 'semi-developed' or 'semi-peripheral'.

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[76](cont'd)industries where local capital plays a role. Nevertheless, this is in great measure due to the ability of local capital to supplement international or state capital. Even where local capital initiates ventures in capital-intensive areas it is often quickly replaced: Ibid., 120-121; 224.

[77]Ibid., 110-112.

[78]James Schlagheck, *The Political, Economic and Labour Climate in Brazil*, Philadelphia: University of Philadelphia (1977), 16-17.

[79]For a good discussion, see: John Wirth, *The Politics of Brazilian Development*, Stanford, California: Stanford University Press (1970), 71-132.

[80]Schlagheck, *The Political, Economic and Labour Climate in Brazil*, 16.

[81]Evans, *Dependent Development*, 43-50.

Energy Consumption in Brazil

The outstanding feature of Brazilian energy consumption is the country's dependence on imported oil. As Table 3.1 illustrates, petroleum makes up roughly 42 per cent of Brazilian energy consumption. Brazil's annual growth in oil consumption is among the highest in the world at approximately 12 per cent.[82] Many of the problems facing Brazil, however, stem from the fact domestic production has never accounted for more than 25 per cent of consumption as illustrated in Table 3.2. The major multinational oil corporations were only extensively involved in distribution because of government policy.

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[82]Peter Odell, *Oil and World Power*, 158.

Table 3.1: Brazilian Energy Consumption:

1970-1977 (%)

Type	1970	1971	1972	1973	1974	1975	1976	1977
Hydraulics	18.9	19.1	21.3	21.9	22.5	23.7	23.8	26.1
Coal	3.9	3.8	3.6	3.2	2.9	3.2	3.5	4.0
Wood	30.8	28.8	25.2	22.4	22.0	21.4	21.5	20.2
Cane Husks	5.5	5.4	5.7	5.7	5.2	4.5	4.2	4.6
Plant Coal	2.4	2.5	2.6	2.4	3.0	3.2	3.2	3.4
Petroleum	38.1	40.4	41.6	44.4	44.4	40.0	43.8	42.7
Natural Gas	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.5
Alcohol	0.2	0.3	0.4	0.3	0.2	0.1	0.1	0.5

Source: Anuario Estatistico Do Brasil (1979), Secretatia De Planejamento Da Presidencia Da Republica, 469.

Table 3.2: Brazil - Principal Oil Statistics, 1959-1978 (000b)

Year	Domestic Demand	Production	Crude Imports	Refined Imports
1964	127,712	33,313	79,785	9,499
1965	119,534	34,342	75,661	8,178
1966	138,384	42,451	83,022	8,565
1967	138,134	53,515	78,625	9,425
1968	169,928	58,785	95,814	20,581
1969	174,712	63,969	110,203	9,626
1970	185,365	60,923	131,121	7,649
1971	205,365	63,513	153,476	12,826
1972	238,938	61,088	179,003	9,554
1973	281,739	62,122	261,179	12,763
1974	302,979	64,751	253,243	12,606
1975	316,385	62,766	262,551	4,322
1976	354,433	61,026	301,457	4,895
1977	368,433	58,686	298,000	7,631
1978	385,062	58,400	337,881	7,089

Source: International Petroleum Annual Statistics, 1964-1978.

Oil Policy in Latin America

Attitudes in Latin America towards the international oil industry vary from grudging admiration to hostility.[83] For the most part, however, Latin American distrust of the multinational oil corporations has shaped relations. The Latin American countries pioneered the struggle against the concession regime by the formation of national petroleum councils and/or state oil companies.[84] In 1922, Argentina became the first country outside of the Soviet Union to establish a vertically integrated state oil company. By 1965 eleven Latin American countries had established state oil companies. In 1975, following the nationalization of the oil industry in Venezuela, Latin American state oil companies controlled a clear majority of the region's oil production.[85] The critical role of petroleum in the development (and security) of many Latin American countries and the dominance of foreign-owned MNCs has made oil a central focus of concern.

Brazilian Oil Policy

In many ways Brazilian oil policy is a reflection of the state's attitude towards development policy. Following the 1930 revolution a new elite emerged which was

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[83]Peter Odell, "Oil and State in Latin America", *International Affairs* 40(4)1964, 668.
[84]Hasan Zakariya, "State Petroleum Companies", *Journal of World Trade Law* 12(6)1978, 484.
[85]Ibid., 183: Bolivia was the first country in Latin America to nationalize an existing oil industry, see: Herbert Klein, "American Oil Companies: The Bolivian Experience", *Inter-American Economic Affairs* 19(2)1964, 47.

characterized by "young technocrats and intellectuals who wanted Brazil to break out of its colonial economy".[86] This new elite was confident that the state had to intervene directly through state corporations since local capitalists were not equal to the task of industrializing Brazil. A debate emerged over the direction Brazilian development should take: state-led versus free enterprise (particularly international capital) development. The debate over oil policy and in particular how and by whom Brazilian oil resources would be exploited mirrors this debate in its entirety. The inability of the local bourgeoisie to develop an industry which required high levels of capital investment and technological expertise sparked fears that Brazil would be plundered by foreign MNCs. Consequently, many Brazilians viewed the state as the only alternative to international capital in the development of national petroleum reserves. This debate shapes Brazilian oil policy.

The Early Years: 1900-1930

Two widely-held myths in Brazil help account for the development of Brazilian petroleum policy: first, that Brazil was endowed with vast reserves of oil; and second, that the large, foreign MNCs were eager to exploit those reserves.[87] During the first years of oil exploration in Brazil, entrepreneurs were totally unsuccessful in

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[86]Peter Smith, "Petrobras: The Politicizing of A State Company, 1953-1964", *Business History Review*, 46(2)1972, 182.

[87]Peter Smith, "Brazilian Oil: From Myth to Reality", *Inter-American Economic Affairs* 30(4)1977, 45.

discovering commercial quantities of oil. This is accounted for by a number of factors. First, until 1930, subsoil wealth was owned by private landowners who, unlike their American counterparts, were very reluctant to invest in high-risk ventures such as oil exploration.[88] Second, a 1908 survey done by a foreign geologist was very pessimistic regarding potential petroleum reserves in Brazil.[89] Third, as early as 1915 Brazilian nationalists advocated policies barring foreign capital in the development of national petroleum resources. This, in addition to Brazil's isolation from large consumer markets, low domestic demand, and poor internal transportation facilities, made the large MN oil corporations reluctant to make serious proposals to find oil.[90] This left the task of finding and developing Brazilian petroleum reserves to local capitalists who were manifestly unequal to the challenge. The federal government established the Geological and Mineralogical Service (SGM) in 1917 to explore for Brazilian petroleum but it faced the same problems as local capitalists: lack of both the necessary capital and technological expertise.

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[88]Similar legislation effectively stimulated development in the United States: Peter Smith, *Oil and Politics in Brazil*, Toronto: The Macmillan Company of Canada Ltd. (1976), 13.

[89]It is important to note that most Brazilians rejected this account of Brazil's petroleum potential because the geologist was a foreigner! This would foreshadow events over a half a century later.

[90]Wirth, *The Politics of Brazilian Development*, 136.

Economic Nationalism and the CNP: 1930-1943

The Provisional Government, established in 1930 and headed by Getulio Vargas, quickly centralized political power and increased the role of the state in the economy. In 1934 the government promulgated a mining code which gave the central government virtually total control over resource development. Between 1934 and 1937 a debate raged between those in favour of state-led development and those in favour of allowing local private capitalists to develop the Brazilian petroleum industry. That foreign capital should be restricted was the only agreement between the two sides.

The government took the first step towards creating a domestic petroleum industry by revising the tariff structure to promote refining in Brazil: between 1935 and 1937 four refineries were established.[91] Vargas enlisted the aid of nationalist General Horta Barbosa. He was instrumental in the institution of a new constitution which had a provision forbidding foreigners from owning shares in petroleum companies in Brazil. Barbosa was also sceptical of local capitalists claiming that they did not have the necessary capital and technological expertise to develop a Brazilian oil industry. Barbosa, however, supported the move to increase domestic refining since a local industry could finance exploration. In 1937 the refineries were owned by foreign and local capitalists. He was anxious to adopt a state monopoly over the whole oil industry but realized that

[91] Smith, *Oil and Politics in Modern Brazil*, 33.

some accommodation with the private sector was required.[92]

In 1938 the National Petroleum Council (CNP) was formed and commanded "to stimulate a national refining industry ... and to carry on a systematic search for oil".[93] The CNP was organized as a special organ of the Presidency and was subject to a military veto. It was created to regulate the Brazilian petroleum industry as well as to engage directly in exploration even *before* any oil was discovered in Brazil (or even any substantial geological surveys were completed). This illustrates the impact of the two myths on Brazilian oil policy. The CNP came into existence only one month after Mexico's stormy expropriation of the local oil industry.

Barbosa hoped to use the CNP to protect local private capital currently in refining while introducing state capital. He hoped to develop oil as a public utility.[94] Initially, the CNP was very successful. In 1939 it made the first discovery of a commercial oil well in Brazil. By 1940, Barbosa sought to make the state the largest refinery operator by heaviliy taxing private refineries. At this point, however, Barbosa's plans were overcome by events. Vargas, anxious to smooth intergovernmental bickering, kept the CNP on a "bare-bones budget that only allowed token

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[92]Wirth, *The Politics of Brazilian Development*, 146-147.
[93]Smith, *Oil and Politics in Modern Brazil*, 35.
[94]Wirth, *The Politics of Brazilian Development*, 146-147: The government allowed two representatives from local business to sit on the directorate of the Council: clearly, Barbosa was trying to ally the interests of local capital with the state against international capital.

exploration."[95] At the same time, the pressures of war began to affect fuel shipments to Brazil which forced the CNP to concentrate its efforts on stockpiling and rationing. This began to turn the tide against the economic nationalism that had shaped Brazilian oil policy. In 1943, with Brazil facing terrible fuel shortages, Barbosa's sudden resignation reflected the new direction that Brazilian oil policy was about to take.

The Defeat of Economic Liberalism, 1943-1950

Barbosa was replaced by Army Colonel Carlos Barreto. He was more concerned with rapidly developing Brazilian oil than with nationalistic controls over ownership. Barreto was in favour of encouraging foreign MN oil corporations to explore and develop Brazilian petroleum resources. By 1945 Brazilian oil production represented only 0.7 per cent of consumption and the CNP declared that "the great amounts of capital needed for the petroleum industry cannot yet be found ... in a strictly nationalistic orbit."[96] The government, however, was unable to attract any substantial foreign interest. In 1946, President General Enrico Durta took office and appealed for laissez-faire liberalism as a remedy for Brazil's underdevelopment. Between 1945-1947 the CNP tried to interest local private capital to invest in

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[95]Ibid., 155: the SGM treated the newly created CNP with great contempt.
[96]Smith, *Oil and Politics in Modern Brazil*, 48.

refineries and exploration but there was little interest.[97] Once again, domestic private capital in Brazil was unable to play a significant role in the Brazilian petroleum industry. The government was faced with the prospect of rewriting petroleum legislation in order to allow extensive foreign investment. In 1947 the Petroleum Statute was drafted which still gave the CNP a central role in directing oil policy but provided for the introduction of large scale international capital on a concessionary basis.[98]

In response to the Petroleum Statute, however, ex-CNP president Barbosa launched a national campaign promoting a state monopoly in Brazil. Barbosa's appeals to nationalism sparked street demonstrations based on the slogan 'O Petroleo E Nosso' (the oil is ours). This radical nationalism was endorsed by a wide sector of the Brazilian population leaving little room for arguments of efficiency. As Chamber of Deputy member Arthur Bernades summarized, "I would prefer that our industries be badly administered, but remain ours, than be well run and belong to foreigners."[99] This attitude ultimately culminated in the defeat of the Petroleum Statute by 1950 and mirrored the dimissal of economic liberalism as a solution to Brazil's general economic problems.

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[97]For example, in a government refinery established in 1946 the stock issue was left open for two years to local private capital but remained unfilled: Wirth, *The Politics of Brazilian Development*, 164.
[98]Ibid., 195.
[99]Smith, *Oil and Politics in Modern Brazil*, 66.

The Creation of Petroleo Brasileiro Sociedade Anonima (Petrobras): 1950-1954

With the defeat of economic liberalism as a solution to Brazil's growing fuel crisis the foundations were set for direct state involvement. The weakness of the Brazilian capitalist class and the strong political position of the proponents of state participation led the government to establish a state company that could deal with Brazil's petroleum problems. Clearly, the arguments pressing for active state involvement were based more on the belief of the possible negative effects that foreign captial would bring than the somewhat more sophisticated reasoning for direct state involvement suggested in the introduction. Moreover, by having complete faith that Brazil was soaked in oil many Brazilians simply rejected the prospect of utilizing international capital in the difficult task of surveying and exploring the country, confident that finding oil was as simple as forming a state company. This myopic view explains much of the legislation which eventually produced the Brazilian state oil company Petrobras.

Establishing Petrobras

In 1950 Vargas returned to power. Although led to establish a state company, the government took an open-minded view toward both domestic and foreign private investment in the hope of promoting a compromise solution. The Petrobras Bill was introduced on 6 December 1951. Vargas intended to steer it through the Brazilian Congress (which

can impose amendments) with some minimal provisions for both domestic and international capital thereby establishing a mixed company. Vargas, however, underestimated the public support for a 'nationalist' solution to the petroleum problem. The Petrobras Bill sparked an acrimonious 22 month debate which produced over 100 amendments by the time it was passed as Law 2004 on 3 October 1953. Two key patterns emerged from the debate which help explain the development of the company. First, the Bill became a political football. Second, the the inability of the Upper House (Senate) to introduce amendments establishing provisions giving private investors important control of Petrobras reflected the weakness of the Brazilian bourgeoisie.

The reasons behind the creation of the state oil company should be clear. First, public opinion precluded international capital developing Brazilian petroleum resources. Second, the Brazilian bourgeoisie lacked the necessary capital, technological and managerial expertise, and political support to complete the task. Thus, the state was led to intervene in a larger fashion than simple expansion of the CNP would allow if the govenment was to meet its priorities. It is important to note, however, that the government was very aware that Petrobras could provide important economic spinoffs.[100]

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[100]Wirth, *The Politics of Brazilian Development*, 7.

The Mandate of Petrobras

The mandate of Petrobras is clear from the legislation and the politics surrounding the company's creation. Law 2004 gave the state a monopoly over: 1) the exploration and development of petroleum resources in Brazil 2) refining of petroleum and 3) maritime and pipeline transportation of petroleum products.[101] This monopoly was to be exercised by both the CNP and Petrobras.[102] The CNP was the policy-making and supervisory body while Petrobras actually operated the oil industry. Law 2004, therefore, gave Petrobras a monopoly over much of the Brazilian petroleum industry with the exception of distribution, petrochemicals, and those refineries and pipelines in operation prior to the 3 October 1953 which were made exempt from the state monopoly.[103] The state oil company had two main tasks: first, to explore and develop Brazilian oil; and second, to establish refineries to make Brazil self-sufficient. In addition, it is clear that Petrobras was designed to stimulate forward and backward linkages in the Brazilian economy from oil related development. This emerges from the tactics behind Brazil's overall development strategy.

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[101]Brazil Law 2004:*Law Establishing Petrobras*, Chapter 1 (Article 1): reprinted in *Barrows: Basic Oil Laws and Concessions Contracts*, (South America, Volume 1 - 1959), New York, Brazil A-2: hereinafter cited as 'Law 2004'.
[102]Law 2004, Chapter 1 (Article 2), Brazil A-2.
[103]Law 2004, Chapter 4 (Article 43), Brazil A-5.

Government Organization

In Law 2004 Petrobras was directly subordinated under the CNP which was designated as the company's "directing and supervisory body".[104] As noted earlier, when the CNP was established it was made a special organ of the Presidency and was independent of any Ministry. This was reinforced by Law 2004 which claimed that "the CNP, an independent organization, [is] under the direct control of the President of the Republic."[105] The CNP was given broad responsibilities: in addition to its function as the controlling agency of Petrobras, it retained its original role as the supervisor of Brazilian oil policy. The CNP seemed a likely effective instrument for controlling Petrobras since: 1) its mandate seemed clear *vis-a-vis* the state oil company and 2) it had the necessary expertise because of its long history in the industry (fifteen years).

Nevertheless, there were some serious problems undermining the ability of the CNP to control Petrobras. These were rooted in the politics behind the company's formation and the legislation establishing the relationship between the controlling agency and the state oil company. In this section we will deal with the latter. Law 2004 did not spell out exactly how Petrobras was to remain accountable to the CNP. Although Law 2004 indicated that governing regulations were forthcoming, they did not appear until

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[104]Law 2004, Chapter 1 (Article 2) Brazil A-1.
[105]Law 2004, Chapter 1 (Article 3), Brazil A-1.

three years later when the weaknesses of the formal control agency were very evident. It was not until 1957, with the release of Decrees 40,845 and 42,786, that the relationship between Petrobras and the CNP was given formal guidelines. Decree 40,845 listed a variety of reports that Petrobras had to furnish to assist the CNP in regulating the company's activities. They included: 1) a yearly report covering current and future plans for exploration and development of oil resources requiring CNP approval 2) a quarterly report on current activities 3) a bi-annual prospecting report and 4) a monthly exploration and refining report. At the same time, the Decree reinforced the CNP's authority over oil policy.[106] Decree 42,786 simply listed the jurisdictional competence of the CNP including the right "to examine and approve the plans covering Petrobras' activities; to decide on and approve the organization of Petrobras' subsidiary companies as well as the financing granted or guaranteed by Petrobras."[107] It can be stated forcefully, however, without prejudging the case, that the initial regulations establishing control over Petrobras were only half-measures. They did not provide the CNP with enough formalized authority effectively to manage the state oil company.

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[106]Brazil Decree 40,845 of 28 January 1957, *Governing Relations Between the CNP and Petrobras*: reprinted in: *Barrows: Basic Oil Laws and Concession Contracts*, (South America, Volume 1: 1959), New York, Brazil B-0 to B-8.
[107]Brazil Decree 42,786 of 10 December 1957, *National Petroleum Council (CNP) Regulations*: reprinted in: *Barrows: Basic Oil Laws and Concessions Contracts*, (South America, Volume 1: 1959), New York, Brazil C-10.

Legal Structure of Petrobras

Petrobras is organized as a mixed, joint-stock company. The state owns most of the common stock with the remainder being held by private Brazilian capital.[108] Prior to the amendments, it was decided that the state would only have a 51 per cent interest to allow local private capital and a small fraction of international capital to invest in the company.[109] This was designed to solidify Petrobras' financial base and increase its support by local capitalists. Provisions were even made to allow private investors to elect two of the nine council members. Vargas hoped to give Petrobras widespread ownership in order to increase its flexibility, a feature sadly lacking in Brazilian oil policy by 1952. Thus, the original Petrobras Bill did not include any 'monopoly language' that might reduce private investment.[110] As a mixed company, legislation which seemed to guarantee a monopoly of decision-making power for the state was sure to scare away private investors. The unamended Petrobras Bill was designed to allow the company to become vertically integrated and free from many of the federal restrictions which

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[108]It is difficult to arrive at a precise division between public and private Brazilian capital in Petrobras although the state definitely has more than 51 per cent, see: Wirth, *The Politics of Brazilian Development*, 194.
[109]Foreigners could only hold one-tenth of one per cent of the voting stock, see: Ibid.
[110]Ibid., 194-195.

traditionally inhibited Brazilian state enterprises.[111] As John Wirth summarized, "they wanted Petrobras to be more like a private industry than a state company"[112] in order to maximize efficiency. Finally, Petrobras was organized as a holding company to decrease centralized control and allow flexible management over its subsidiaries.

It is critical to note that the intention of decentralizing control and reinforcing policy flexibility was designed in part to reduce the power of the president of the company who had a veto over the decisions made by the Executive Board of Directors and the Administrative Council. In fact, the president of the company only needed the support of one of the other three Executive Board of Directors to have substantial control over Petrobras' activities.[113] The implications for the development of the company were profound since the president of the Petrobras could be replaced at any time by the President of the Republic.[114]

The amendments to the Petrobras Bill, however, reinforced the most dangerous tendencies in the company, particularly given the weakness of the controlling agency. Simply, the amendments centralized power in the hands of the company president, putting Petrobras virtually out of the reach of civilian politicans and reduced the company's

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[111]Ibid., 195.
[112]Ibid.
[113]Ibid., 214.
[114]Law 2004, Chapter 4 (Article 19), Brazil A-3.

policy flexibility. The legislation explicitly stated that the government had a monopoly over decision-making which reduced any possible input from the private investors.[115] This reduced the interest of private investors since the company was unlikely to operate primarily to maximize profit. International capital was totally restricted from participating in exploration and development in Brazil which again reduced policy flexibility. Finally, the legislation centralized control in Petrobras by tightening subsidiary provisions in order to prevent direct financial ties with international capital.[116]

The political atmosphere which had pushed the state to establish Petrobras dictated to a great extent the legislation forming the company. This reduced government control to a minimum reinforcing the weakness of the CNP. In a bizarre development, Vargas took his own life in 1954 leaving a suicide note which claimed that 'international groups' conspired against the Brazilian government and specifically Petrobras: this rendered public opposition to the state oil company virtually impotent for almost a decade.[117] Petrobras evolved as a "sacred cow"[118] immune from effective government control. Responding to political pressure, the President of Brazil undermined the authority of the CNP. Since the CNP was independent of any ministry it

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[115]Wirth, *The Politics of Brazilian Development*, 206.
[116]Ibid., 202; 206.
[117]Smith, *Oil and Politics in Modern Brazil*, 101.
[118]Wirth, *The Politics of Brazilian Development*, 214.

did not have a designated spokesman in the Brazilian Cabinet and was unable to influence government policy.

Financial Structure of Petrobras

With the exception of the restrictions on both local and international private capital introduced as amendments, the financial structure of Petrobras remained virtually the same as that proposed by Vargas. He had constructed the financing of Petrobras to allow the company to be financially independent of the annual government budget. Five sources of revenue were designated for Petrobras: 1) an initial subscription of Cr $4 billion (US $200 million) to be increased to Cr $10 billion by 1956 2) the inheritance of existing CNP properties valued at Cr $2.5 billion 3) part of a special tax on liquid fuels 4) part of a special tax on automobiles, and finally 5) revenue from the sale of stock to the public. This solidified Petrobras' short-term financial independence from the government. As one commentator concluded, "the company had clearly been given a virtual blank check to create a self-sufficient, integrated national oil industry."[119] For the long-term, however, the company had a critical weakness since it could not raise sufficient debt capital and remained tied to fixed sources. This would stunt the growth of the company by the early sixties. Petrobras would not have any substantial internal cash flow until it actually discovered commercial quantities of oil. Thus, the long-term financing of Petrobras, like the

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[119] Smith, "Petrobras", 187.

form and shape of Brazilian oil policy, was founded on the belief that Brazil had great reserves of petroleum.

Public and Private Capital in the Brazilian Oil Industry

There is insufficient data to provide a useful estimate of the proportion of public and private capital invested in the Brazilian petroleum industry; however, some general comments can be made. The relatively early entrance into the development of Brazilian oil resources by the state blocked a monopoly of private capital. International capital was restricted from the outset, yet, the Brazilian capitalist class was unable to capitalize on this advantage. As Petrobras grew, the growth of local capital was also restricted. Only in distribution and some sectors of refining and transportation has private capital played a significant role. The state monopoly over exploration and development, new refineries and transportation systems by 1953, (on the eve of rapid industrial expansion) ensured a dominant role for public capital.

The decision to create a state monopoly in most sectors of the oil industry represented an enormous outlay of domestic reserves and foreign exchange in the short-term.[120] This nationalistic policy represented a great strain on the already faltering Brazilian economy since Petrobras had to import virtually all of the necessary equipment to establish

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[120]Smith, *Oil and Politics in Modern Brazil*, 97-98.

a domestic oil industry.[121] The cost could really only be justified if Petrobras was successful in rapidly increasing Brazilian oil production and refining capacity.

Petrobras and Brazilian Oil Policy: 1954-1981

Petrobras' development since 1954 can be divided into three stages which reflect the general pattern of Brazilian development. The period 1954-1960 has accurately been termed as "years of success"[122] for Petrobras. The state oil company's first president adopted a professional attitude towards its role. He was anxious to use the company's position to increase domestic production and refining capacity. Petrobras did not hesitate to use as much foreign assistance as possible, hiring foreign companies and using foreign technicians. Moreover, already overburdened, the company showed sound economic sense in refusing the opportunity to expand into distribution in 1956. This professional attitude soon produced results as Petrobras began to bring more oil onstream. Between 1954-1960 crude reserves increased from 150 million barrels (m/b) to 620 m/b with an increase in production to 85,000 barrels per day (b/p/d). Refining capacity was to be expanded to 75,000 b/p/d by 1962.[123] Finally, in 1963, Petrobras was designated the monopoly purchaser of crude imports for Brazil. This strengthened the government's bargaining position to negotiate for a lower price during the glut conditions in

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[121] Ibid., 98.
[122] Ibid., 98.
[123] Ibid., 131.

the sixties.[124]

Despite Petrobras' successes some serious problems remained. First, Brazilian consumption of petroleum continued to escalate rapidly with little consideration of using alternative energy sources. Second, Brazilian refining capacity lagged behind total consumption. Third, a high turnover in executive personnel weakened company management. Fourth, the rapid growth of Petrobras coupled with its broad political support was matched by a decline in the authority and competence of the CNP. For example, the CNP tried to decentralize power in Petrobras after 1955 but was unsuccessful.[125] The company became a "free agent in the councils of government",[126] commanding significant political clout.[127]

Between 1960-1964 Petrobras was unable to match the rapid increase in Brazilian consumption of petroleum with corresponding increases in domestic production and consequently, oil imports rose dramatically. Radical nationalists denounced any criticisms of the company but more significantly, refused to believe geological surveys which indicated that Brazil had little petroleum. For example, the Link Report of 1959, which was prepared by

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[124]see: Brazil 23 December 1963, *Petroleum Monopoly Decree*: reprinted in: *Barrows: Basic Oil Laws and Concession Contracts* (South America, Supplement 4: 1964), New York: Brazil A-1 to A-3.
[125]Wirth, *The Politics of Brazilian Development*, 214.
[126]Ibid.
[127]One president of Petrobras claimed that he could elect 100 deputies to the Congress; Ibid.

fourteen top geologists, gave a very pessimistic account of the petroleum potential of Brazil. It was simply denounced, however, by many Brazilians as the work of multinational oil 'trusts'. This conclusion was supported by many top Petrobras officials.[128] Thus, while Petrobras had grown tremendously, a variety of serious problems faced the company. As Peter Smith concluded:

> Petrobras was becoming hypnotized with its own image: it was not trying to discover *if* Brazil had abundant oil reserves, as Brazilians believed, but to *prove* that it *had*. Thus, discoveries were increasingly trumpeted as proof that self-sufficiency was about to be reached. Finally, Petrobras came to accept and then to preach that it was *the* barrier staving off the rapacious 'trusts'. Criticism of the company had by 1960 become likened to treason, its sole purpose being to undermine this entity so vital to Brazil's independence. In other words, by 1960 Petrobras believed that its role was in a sense to confirm the myths about Brazil's oil - that it was abundant and that the 'trusts' were eager to exploit it - rather than to investigate them.[129]

All the problems which plagued Petrobras seemed to reflect the growing chaos in Brazilian political, economic, and social life between 1960-1964. As the economic crisis deepened in Brazil to include Petrobras (the company was near bankruptcy in 1963) different sectors of the Brazilian polity made charges and counter-charges against the state oil company. In April 1964, however, the military launched a *coup d'etat* to stop Brazil's national disintegration which the debate around Petrobras only mirrored. The military

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[128] Smith, *Oil and Politics in Modern Brazil*, 125-126.
[129] Ibid., 131-132.

established tight control over Petrobras immediately removing the extremist elements from the company and Brazilian politics in general. This was done to eliminate the company's high public profile and allow it to serve its stated purpose. Petrobras expanded vigorously in both production and refining but consumption continued to rise rapidly. For example, in 1968 consumption rose 16 per cent.[130] By 1970 it was reported that despite Petrobras' efforts, domestic production only accounted for one-third of consumption.[131]

These trends produced three profound changes in Brazilian energy policy following 1970 which represent a repudiation of the myths which had dictated Brazilian oil policy. First, in 1972, Petrobras signed a contractor agreement with INOC to explore for oil in Iraq.[132] Second, in October 1975,[133] the government announced that foreign multinational oil corporations would be permitted to explore in promising offshore areas since the state was "determined to maximize exploration and development".[134] This trend was greatly accelerated and, in November 1980, it was reported that "the long standing policy of limiting the private

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[130]"Vigorous Expansion In Brazil", *Petroleum Economist* 36(5)May 1969, 179-181.

[131]"Petrobras At the Crossroads", *Petroleum Economist* 38(4)April 1971, 139-140.

[132]"Iraq: Petrobras As INOC Contractor", *Petroleum Economist* 39(9)September 1972, 341: Similar deals were signed with Columbia, Eygpt and Algeria.

[133]"Brazil Considers Private Help", *Petroleum Economist* 42(10)October 1975, 381-383.

[134]"Brazil Opens Offshore Areas", *Petroleum Economist* 43(3)March 1976, 86.

sector's role in exploration has now been abandoned altogether".[135] Finally, in order to reduce Brazil's high dependence on oil, the state has instituted a concentrated effort to develop hydro-electric and nuclear power plants.[136]

Assessment of Petrobras

Two main goals seemed to be present at Petrobras' foundation: first, to explore for and develop domestic supplies of petroleum to reduce imports; and second, to increase domestic refining capacity in order to become self-sufficient in refined petroleum products. In the effort to discover substantial quantities of domestic reserves, Petrobras has failed miserably. Of course, it cannot be held to blame that Brazil does not have much oil. In the first decade of Petrobras' history, however, the company seemed more anxious to reinforce the myth that Brazil had enormous quantities of oil rather than in investigating its truth. Petrobras exhaustively explored much of the country for oil, surveying and drilling in even the most unpromising sedimentary basins. Arthur Link, ex-head of Petrobras' geological department, estimated that the company wasted more than US $150 million exploring geologically unpromising areas between 1954 and 1960.[137] Petrobras spent US $300

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[135] "Brazil: Open Door Policy to Oil Search", *Petroleum Economist* 47(11)November 1980, 487.
[136] Schlagheck, *The Political, Economic and Labour Climate in Brazil*, 9-10.
[137] Wirth, *The Politics of Brazilian Development*, 259 (footnote 47).

million on exploration in that period with very poor results. As one commentator summarized, "that may be something of a world's record for yielding minimal results".[138] It was not until 1965 that Petrobras abandoned its country-wide search for oil and concentrated on the more promising areas in the Northeast.[139] Moreover, it was not until the late sixties that Petrobras began to explore outside of Brazil. Once again, defenders of Petrobras might argue that since the company was a creature of nationalism that it had no other choice but to investigate Brazil's petroleum potential. While it is true that Petrobras was operating under tremendous political pressure (which shifts some of the blame), the fact remains that the company encouraged its political role. The most obvious example of this was the rejection of the Link Report in 1959 by Petrobras officials. Thus, it is safe to conclude that not only was Petrobras unsuccessful in its effort to discover domestic reserves of petroleum, but that it did so inefficiently and reflected the worst tendencies of public enterprises.

In the refining sector Petrobras has been successful at achieving self-sufficiency although it is difficult to determine at what cost. By 1970 Brazil only imported about 2

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[138]Ibid., 213.

[139]"Brazil's Widening Gap", *Petroleum Economist* 37(5)May 1970, 179.

per cent of refined products.[140] Currently, Brazil has a refining capacity of 1.2 m/b/d to cover a domestic demand of 1 m/b/d. This is a remarkable feature of Petrobras' record particularly considering Brazil's skyrocketing consumption. Brazil's virtual self-sufficiency in refining has represented important savings of hard currency.

Petrobras was designed to expand into a totally integrated company, and has gone about it with great vigour. The company is a giant internationally ranking in the top 80 industrial firms outside of the United States. In addition to exploration, production, and refining, it has expanded into transportation, distribution, and petrochemicals. In transportation, Petrobras has been steadily adding to its tanker fleet in order to save long-term foreign exchange. In distribution, Petrobras controlled over 20 per cent of the market by 1975.[141] Finally, in petrochemicals, Petrobras created a subsidiary (Petroquisa) in 1967 which today dominates the market.[142] Petrobras' role as monopoly importer of crude oil gave Brazil an important bargaining tool to negotiate for a low imported price. As one author noted, the sheer size of the Brazilian market made Brazil a barometer of crude oil prices during the price wars of the sixties.[143] Petrobras has attempted to utilize domestic goods and services in the attempt to forge forward and

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[140] Smith, *Oil and Politics in Modern Brazil*, 177-178.
[141] Ibid., 178.
[142] Evans, *Dependent Development*, 228-249.
[143] Smith, *Oil and Politics in Modern Brazil*, 157-158.

backward linkages.[144] No substantial data is available, however, to comment accurately on the company's performance in this regard. Finally, Petrobras has been used for special regional investments to stimulate development in poorer areas in Brazil[145] and has been instrumental, along with the CNP, in establishing courses at the university level to educate nationals to work in the industry.

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[144] Ibid., 178.

[145] Daland, *Brazilian Planning*, 65.

IV. STATOIL

The Political Economy of Norway

The absence in Norway of a dominant land-owning class in the classical feudal tradition led to the growth of an important political position for small and independent farmers.[146] The Norwegian labour party has played a major role in the formulation of government policy since 1945 and has important links with small farmers and fishermen. The strong political strength of both the small farmers and the Norwegian labour movement reflects the historical weakness of the Norwegian capitalist class with the possible exception of the shipowners.[147] The majority of Norwegian firms are small or medium sized; only 100 firms employ more than 500 workers. For the most part the bulk of Norwegian exports consists of raw materials or semi-processed goods.[148]

International capital has always played a significant role in the Norwegian economy, particularly during the early stages of industrialization from 1900-1914 and following 1956.[149] It has tended to concentrate in large, capital-intensive and export-oriented industries and

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[146] Petter Nore, "The International Oil Industry and National Economic Development: The Case of Norway", *The Nationalization of Multinationals in Peripheral Economies*, (eds.) Julio Faundez and Sol Picciotto, London: The Macmillan Press Ltd., (1978), 165.
[147] Ibid., 165.
[148] Ibid., 167.
[149] Johan Einarsen, "Foreign Investment in Norway", *Foreign Investment: The Experience of Host Countries* , (eds.) Isaiah Litvak and Christopher Mark, New York: Praeger Publishers (1970), 161.

accounts for approximately 23 per cent of the total assets in the Norwegian economy.[150]

The state industrial sector in Norway was of limited importance until developments following 1970. There is, however, a strong tradition of economic planning. Petter Nore argues that this tendency is a result of the historical weakness of the Norwegian bourgeoisie which has been forced to rely on the state to protect the accumulation process.[151] Characterized by a weak domestic bourgeoisie where international capital plays a dominant role, the Norwegian economy can be classfied as 'semi-developed' or 'semi-peripheral'.[152]

Energy Consumption in Norway

The Norwegian energy market differs strikingly from that of most Western European countries both in the relative importance of different sectors and the amount of energy consumed.[153] Western Europe relied almost entirely on coal and petroleum as energy sources between 1955 and 1972 with a switch to petroleum by 1972.[154] In Norway hydro-electricity has accounted for between 50 to 60 per cent of total energy consumption while petroleum has never accounted for more

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[150] Nore, "The International Oil Industry and National Economic Development", 208 (footnote 9).
[151] Ibid.
[152] Ibid., 162.
[153] For a discussion of Norwegian energy policy, see: Keith Chapman, *North Sea Oil and Gas: A Geographical Perspective*, London: David and Charles (1976), 202-204.
[154] Romano Prodi and Alberto Clo, "Europe", *The Oil Crisis*, (ed.) Raymond Vernon, New York: W.W. Norton Company (1976), 92.

than 35 per cent. Moreover, the amount of energy consumed in Norway is very small relative to almost every Western European country.[155] As Table 4.1 reveals, Norway produced no oil until 1971. The major multinational oil corporations were responsible for importing, refining, and distributing oil in Norway.

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[155] George Ray, *Western Europe and the Energy Crisis*, London: Trade Policy Research Centre (1975), 11.

Table 4.1: Norway: Principal Oil Statistics:
1964-1978 (000 barrels)

Year	Domestic Demand	Production	Crude Imports	Refined Imports
1964	33,887	0	19,911	25,378
1965	36,665	0	19,918	24,548
1966	41,600	0	21,331	29,338
1967	44,971	0	23,283	29,595
1968	48,611	0	35,810	24,170
1969	54,148	0	37,758	25,956
1970	60,191	0	47,974	30,081
1971	59,810	2081	41,407	?
1972	62,777	12,126	47,893	30,271
1973	56,706	11,166	53,905	20,869
1974	58,116	12,707	50,039	27,667
1975	60,045	68,900	42,725	22,233
1976	63,209	101,900	61,068	21,866
1977	71,572	101,887	62,865	24,504
1978	56,859(2)	127,163	52,351	16,020

Source: 1) International Petroleum Annual Statistics, 1964-1978.

Norwegian Oil Policy: 1961-1969

Prior to offshore activity in the North Sea, there was no petroleum development in Norway. Thus, when the Norwegian government was first approached in the autumn of 1962 for permission to explore the North Sea, no legal framework existed. It was faced with constructing a legal framework for an industry of which it had neither adequate knowledge nor appreciation of the possible implications of allowing the oil industry to develop locally.[156] As we saw in chapter two, the pattern of oil regime development tends to be as follows: as the state acquires knowledge of the micro-economic realities of the oil industry, the terms of trade are changed constantly to improve the position of the host government. Such a pattern emerged in the development of Norwegian oil policy.

The Early Days

In the autumn of 1962, Phillips Petroleum approached the Norwegian government for permission to carry out seismic surveys of the Norwegian sector of the North Sea. In fact, Phillips offered Norway a "sole country, sole company offer" [157] providing the company with a monopoly over development in the Norwegian sector of the North Sea. This offer was wisely rejected primarily for economic reasons, but also because there were no internationally agreed upon boundaries

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[156] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 13.
[157] Randy Morse, "Second Decade for Norwegian Oil - Second Thoughts?", *Scandinavian Review* 65(1)1977, 24.

in the North Sea nor any Norwegian legal framework for oil development. Anxious to avoid any "legal uncertainities",[158] the Norwegian government wasted little time in protecting its interest in the North Sea. Its declaration on 31 May 1963 claimed sovereignty over subsea resources within the Norwegian sector of the North Sea. Soon thereafter, the Norwegian Storting (Parliament) enacted a statute vesting in the state the right to arrange for the exploitation of submarine natural resources and allowing seismic studies to proceed immediately, but with no provisions for drilling.

The First Round: 1965

Norway's early approach to the exploration of petroleum resources in the North Sea was dictated by macro-economic considerations. The relatively slow approach adopted by the Norwegian government was a result of its comfortable economic and energy situation. This contrasted with the United Kingdom which granted "licences to as many applicants as possible".[159] The Storting did not pass any regulations until April 1965 (the United Kingdom passed similar legislation a year earlier), almost three years after being approached by Phillips.

The companies were to pay a flat rate royalty of 10 per cent and were granted special tax concessions. At the same time, the oil industry was under no written obligation to

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[158] "Rush To The North Sea", *Petroleum Economist* 30(6)June 1963, 213.

[159] "Million Pound North Sea Search", *Petroleum Economist* 31(9)October 1964, 364-365.

give any preference to Norwegian goods and services. Three reasons account for Norway's attractive offer: first, in 1965, the major oil companies dominated the international oil industry and controlled upstream and downstream operations; second, the potential resources of the North Sea, located in an environmentally hostile area, were somewhat unknown[160] and, consequently, the argument was made that attractive terms were required to convince the oil industry to develop such a 'high risk' location; finally, there was no alternative to the major multinational oil corporations for development.[161]

Norway's allocation of licences in 1965 reflected its concern for managing the macro-economic effects of local petroleum development. In the first licencing round of that year a total of 78 blocks were awarded to nine companies which accounted for less than 25 per cent of the area south of 62'N. As revealed by Table 4.2, this had a direct impact on the number of wells drilled. In addition, Norway sought to learn as much as possible about the micro-economic realities of the oil industry. The decision by Norway to slow down development can be viewed as a method of reducing the 'cost of learning'. Provisions were made for direct

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[160] Nore suggests that the multinational oil corporations had a good idea of the potential of the North Sea for petroleum resources before 1965; Nore, "The International Oil Industry and National Economic Development", 168/208 (footnote 15).

[161] Ibid., 168: it is also important to note that the state rejected utilizing Norsk Hydro in which it had a 48 per cent interest because some of the shares were held by French interests.

access by the state to all data on exploration and development.

Table 4.2: Exploration Wells Drilled in the Norwegian and British sectors of the North Sea: 1964-1970

Year	United Kingdon(1)	Norway(2)
1964	1	0
1965	10	1
1966	20	2
1967	42	6
1968	31	10
1969	42	12
1970	22	14
Total Wells Drilled	168	45

Source: (1) Mackay and Mackay, *The Poltical Economy of North Sea Oil*, 58.

(2) Lind and Mackay, *Norwegian Oil Policies*, 13.

The Second Round: 1968-1969

In 1965 the Labour government, which had introduced the original oil legislation, was defeated in fall elections and replaced by a liberal-conservative coalition. In May 1968, with the invitations for applications for the second round, provisions for state participation were introduced. This policy was adopted for three reasons: first, to increase the level of Norwegian capital invested in North Sea development; second, to increase government revenues (economic rent); and finally, to increase government knowledge and control over activity in the North Sea.[162] The decision to require state participation was encouraged as news of a possible important discovery by Phillips Petroleum became known in 1968.[163] It is clear the government realized it could obtain extra rent through other methods,[164] thus, the decision was justified on other grounds:

> As [a] 'landowner' the government is not interested in income alone, but is also interested in the manner in which the country's natural resources are utilized. Operations of such magnitude as these will naturally have effects upon the community, effects far beyond the direct results of actual exploration and exploitation. Active participation creates insight and through that a better basis for exercising influence upon events connected with activities on the Continental Shelf.[165]

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[162] Norway, Ministry of Industry, Report no. 30 to the Norwegian Storting (1973-1974): *Operations on the Norwegian Continental Shelf* (unofficial English translation), 43: hereinafter cited as, Report no. 30.
[163] Dam, *Oil Resources*, 56.
[164] Report no. 30, 44.
[165] Ibid.

The government "regarded it as a great advantage that Norwegian interests [be] engaged in petroleum exploration and exploitation."[166] In the first round in 1965 little Norwegian private capital was introduced into the activity in the North Sea. Some preference was given to prospective applicants who included Norwegian interests, yet, this only resulted in one successful applicant. Consequenty, in 1968, government participation ranging to 39 per cent became a condition for a licence although it could be reduced by including private Norwegian interests in the licence group. Government participation came in two varieties: net profit sharing or carried interest.[167]

Without jumping too far ahead, it is important to note that the attempt to introduce private Norwegian capital failed except where the state intervened as in the cases of Norsk Hydro and Saga PetroKjemi. By 1970 it was clear that private Norwegian oil companies had "too little capital and lack[ed] the qualifications necessary to bring anything of value to the operations".[168] Most Norwegian companies remained dependent on international capital. They were

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[166] Ibid., 48.

[167] Under the net profit scheme, a fixed percentage of net profit was to be paid to the state over and above the 10 per cent royalty and taxes. Under the carried interest arrangement, the state's interest is 'carried' until petroleum is discovered when the government has an option to participate. If it decides to participate in development of the petroleum then it must pay its share of the past and future costs. Following 1969 the net profit arrangement was abandoned in favour of the carried interest system which offered more control and greater flexability to the state.

[168] Report no. 30, 49.

usually only allowed as partners "in the hope that it will then be easier to obtain licences from Norwegian authorities."[169] The state decided to concentrate private Norwegian interests into a single company which could eventually operate as a fully integrated international oil company. This resulted in the formation of Saga Petrokjemi in 1972 which represents 96 Norwegian enterprises. In the case of Norsk Hydro, which was a part state owned company (48 per cent; and later to 51 per cent), the Norwegian government acquired controlling interest and introduced some local private capital. The decision to introduce state participation had broad support and, in fact, was implemented by a right-of-centre coalition. This consensus is a remarkable feature of Norwegian oil policy. Thus, from the outset, the government endeavoured to control the development of the oil industry in the North Sea. Originally, this was done with the careful allocation of licences. By 1968, however, it was concluded that state participation was required in order to achieve national priorities.

The Creation Of Den Norske Stats Ojeselskap (Statoil)

Two clear trends emerge from our analysis of Norwegian oil policy between 1961-1969: first, the go-slow policy; and second, growing state participation. As has been discussed, Norway did not accept the traditional role of the major oil companies. Of course, Norway was affected by the turmoil of

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[169] Ibid.

the early seventies. The growing dependence of Western Europe on imported oil from the Middle East and North Africa favoured North Sea oil development for obvious strategic and geographical reasons.

The confirmation of the Ekofisk field in 1969 placed new pressures on the government particularly regarding economic policy.[170] This field's development promised to have a far reaching impact. Norway was extremely anxious to maximize the economic benefits and reduce the social and environmental costs of oil development.[171] By regulating the number of blocks for exploration, Norway sought to impose its optimum rate on the oil industry. However, with the confirmation of the Ekofisk discovery it became clear that Norway would require more direct means to influence activity in the North Sea if development was to conform to a nationally chosen optimum rate. Fiscal instruments were not sufficient. The traditional barriers to entry to the oil industry demanded active state participation if Norway was

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[170] The discovery also placed international pressures on Norway, see: Morse, "Second Decade for Norwegian Oil", 28-29; John Ausland, *Norway, Oil and Foreign Policy*, Oslo: J.W. Cappelens Forlag (1979).

[171] Oystein Noreng, "Norwegian Oil Industry on the Continental Shelf -- Social Impact, Possibilities, Problems and Policies", *Consequences of Offshore Oil - Norway, Scotland and Newfoundland*, (ed.) Maurice Scarlett, Newfoundland: Memorial University (1977), 60-71; Ministry of Finance, Parliamentary Report no. 25 to the Norwegian Storting (19731974), *The Parliamentary Report on the Petroleum Industry in Norwegian Society* (unofficial English translation): hereinafter cited as Report no. 25.

to have "formal and real control".[172] As a senior official in the Ministry of Petroleum and Energy summarized:

> There is a very great difference between having control over the formal decision-making process and over the real decision-making process, and the real decision-making process is probably the only way of implementing the national ideas in the business. We felt that only through direct engagement, a fingertip feeling for what this business is about, only through that way of handling things could we achieve a national supervision and control over the business and build our competence.[173]

Establishing Statoil

Discussion regarding a state oil company first arose in late 1969 with the confirmation of the Ekofisk discovery. In September 1972 the idea was sent to a committee by the minority Labour government. On 24 March 1971 the committee proposed the creation of a state-owned oil company. The Labour government supported this decision but fell in the wake of the EEC referendum in 1972. The state oil company was confirmed, however, by a coalition of liberal-conservative parties. The legislation for the creation of Statoil received unanimous approval on 14 June 1972. The consensus behind the establishment of the company reflects the general concern in Norway of the wide ranging effects of North Sea oil development. The decision to

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[172] Ministry of Petroleum and Energy, Report no. 53 to the Norwegian Storting (1979-1980), *Concerning Activity on the Norwegian Continental Shelf* (unofficial English translation), 8: hereinafter cited as Report no. 53.
[173] *Canada: House of Commons*, Minutes, Proceedings and Evidence of the Standing Committee: National Resources and Public Works regarding Bill C-48, 26 March 1981, 40:33: hereinafter cited as *National Resources* with appropriate specific information.

establish Statoil was made in the effort to manage effectively the enormous impact that Norwegian oil production would bring.[174] By 1972, Norway concluded that without direct state participation through a state oil company the development of oil resources would not conform to the national interest.

The state had three key priorities. First, it was anxious to maximize the economic benefits from oil production while keeping social costs at a minimum. The economic spinoffs[175] from the oil industry became a prime concern of the government. The Ministry of Finance calculated that most of the economic growth that Norway would experience following 1974 would be due to oil related development.[176] By 1970, foreign companies operating in Norwegian waters had shown a clear bias to their traditional (non-Norwegian) suppliers.[177] One solution was the utilization of Statoil as a vehicle to promote Norwegian goods and services.[178]

Second, it was anxious to increase revenues through Statoil. By insisting on a 50 per cent government participation share through Statoil the rent percentage to

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174 Noreng, "Norwegian Oil Industry", 72.

175 For a more thorough discussion of linkage than can be given here, see: Nore, "The International Oil Industry and National Economic Development", 187-189.

176 Noreng, "Norwegian Oil Industry", 64.

177 Nore, "The International Oil Industry and National Economic Development", 188.

178 Statoil's direct contact with suppliers also gave the government useful insight into the competitiveness of Norwegian goods and services.

the state increased to 71 per cent by 1973.[179] Third, it is clear that the state viewed Norwegian public capital as the only alternative to international capital in the development of the North Sea. The government concluded that most local capitalists had neither the financial backing nor technical expertise to participate fully in the development of Norwegian oil resources.[180]

The Mandate of Statoil

Statoil's mandate is clear from the legislation establishing the company and government reports.[181] First, it was viewed by the state "as being a very important agency for obtaining national control and management"[182] of Norwegian petroleum resources. Second, the government was anxious to use Statoil to establish "an integrated Norwegian petroleum community."[183] In many ways a state oil company is a shortcut to developing national expertise and thus, provides the state with personnel versed in the micro-economic realties of the industry. At the same time, it was clear that the state was anxious that Statoil expand into downstream operations. Third, the state viewed Statoil as a tool for promoting Norwegian goods and services from

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179 Nore, "The International Oil Industry and National Economic Development", 176.
180 In fact, laws were constructed to bar small Norwegian firms from participating in North Sea development: Noreng, "Norwegian Oil Industry", 73.
181 The Ministry of Industry, Report no. 81 to the Norwegian Storting (1974-1975), (unofficial English translation): hereinafter cited as, Report no. 81.
182 Report no. 30, 36.
183 Ibid., 35.

the petroleum sector through cooperation with local industry.[184] Fourth, Statoil was to to be used to address some of Norway's regional disparities. Finally, Statoil was to have the primary role in exploration and development north of 62'N, which is an extremely sensitive area environmentally and politically.[185] Statoil's mandate evolved directly from the broad concerns which brought the state to establish the company.

Government Organization

Statoil operates under two Ministries and one Directorate where the authority over oil activity is divided. In 1972 a Petroleum Directorate and a special Oil and Mining Department in the Ministry of Industry were established along with Statoil. Briefly, the Petroleum Directorate was given three principal functions: first, a mandate to perform long-term technical and geological analysis in order to prepare plans for future activities; second, the authority to undertake technical and safety supervision of activities; and third, supervision over legal aspects of oil development and financial scrutiny of licensees.[186] The special Oil and Mining Department was continuously strengthened until January 1978 when it was transformed into the Ministry of Petroleum and Energy. It

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[184] Ibid.
[185] Statoil was also envisioned as a political tool principally to ease Soviet concerns that American based corporations might be directly involved in the exploitation of resources north of 62'N.
[186] Report no. 81, 35-41.

"is responsible for legislation, allocation concessions, production licences, landing licences, price stipulations, preparation of economic analyses, etc. as well as for matters concerning Statoil".[187] The Petroleum Directorate is directly subordinated under the two Ministries and oversees the practical implementation of policy. Statoil reports directly to the Ministry of Petroleum and Energy which is kept informed by the Petroleum Directorate.[188] Statoil requires "the Minister's approval in all matters of principle or of major financial or political importance."[189] Th Ministry of Finance, which has traditionally been responsible for overseeing the development of the Norwegian economy, also plays a central role in controlling Statoil.

This control function illustrates the concern of the state to have an efficient system of accountability and control. The Norwegian state concluded that "[w]here Statoil is concerned, it will be especially important that the requirements of poltical control ensure that the political authorities enter into decision-making processes at an early stage."[190] First, the controlling agencies have legislative authority over the company. Second, Statoil is integrated into a hierarchical structure where the superior bodies have

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[187] Report no 53, 151: see, also: 152-153: In 1978, the authority over safety was transferred from the Petroleum Directorate to the Ministry of Local Government and Labour.
[188] Ibid., 154.: As noted the Ministry of Finance has some scrutiny over future plans. Also the Ministry of Environment moniters activity on the Continental Shelf.
[189] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 147.
[190] Report no. 30, 39.

the capacity for expertise and the authority to scrutinize. The Norwegians have opted for the second method for controlling public corporations outlined in the introduction. This emphasizes a flow of information from Statoil through the various Ministries. Statoil must submit a yearly report to the Ministry of Petroleum and Energy[191] and to the Storting, covering all matters which could be of political importance or could affect the basic principles of policy. Statoil must also submit an annual four year prospectus of future financial and operational plans and data, and must furnish bi-annual comprehensive surveys of all of its main activities including subsidiaries and joint-ventures to the Ministry. These are analyzed and published in a report presented to the Storting. The Ministry can also demand that other aspects of Statoil's activities be examined in reports.

Legal Structure of Statoil

Statoil is organized as a joint stock company where the state owns all of the shares. Since the state is the majority shareholder it can exercise direct influence by appointing the Board of Directors. At the same time, the Ministry of Petroleum and Energy holds all the votes in the General Assembly which "may lay down general guidelines for the company in the form of articles of association or make

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[191] Until January 1978 Statoil was responsible to the Ministry of Industry. The Ministry of Petroleum and Energy was created at that time.

decisions on individual affairs."[192] In addition, in Norway, a special committee of representatives is established for each publically owned corporation. It has the authority to monitor company accounts and ensure that motions adopted at the general meeting are carried out.[193] The state elects two-thirds of this Committee.

While the combination of government organization and the legal structure of Statoil would seem to suggest that the state has a stranglehold over the company, it is important to note that there is some distance between the supervisory government agencies and the state enterprises. First, Norwegian law prohibits civil servants to sit on the Boards of Governors or the Committees of Representatives of public corporations. Second, it is the explicit intention of the state to allow Statoil to diversify into a group company with various subsidiaries. This might permit Statoil to gain a monopoly position which would reduce government control. Such a development clearly concerns the government. The Storting Comptroller General, who regularly examines the accounts of public corporations, has limited authority to scrutinize subsidiaries.[194]

Financial Structure of Statoil

Statoil's growth has been financed primarily by the Norwegian government. At the outset Statoil's share capital

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[192] Report no. 30, 41.
[193] Ibid.
[194] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 147.

was Nkr. 155 million and was granted directly in the state budget.[195] This provided the state with an important financial leverage over the company. In a 1976 government report it was decided that Statoil's revenue should be awarded by the state through the annual budget.[196] By 1978, however, economic problems forced Norway to allow Statoil to obtain direct loans. In 1978 the company received a loan of Nkr. 2000 million from a group of foreign banks. This is an important precedent since it released the state oil company from some of the financial control of the government. Further direct borrowing would represent an erosion of the state's financial leverage over Statoil.[197] One of the most important sources of funding for any oil company is the internal cash flow. For the time being Statoil's potential profits will remain in the company and do not have to be channelled back to the Treasury. This represents the prospect of an enormous amount of financial independence for Statoil. However, once oil production begins to rise and Statoil shows a substantial profit, the decision of where the revenue is to be accumulated will become a crucial question.[198]

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[195] Report no. 53, 123.
[196] Ministry of Industry, Bill no. 143 to Norwegian Storting (1974-1975), *Financing of 'Statoil' and an Additional Contribution to the Company's Capital Requirements* (unofficial English translation): cited in Report no. 53, 123.
[197] Report no. 53, 150.
[198] Report no. 30, 39.

Public and Private Capital in the Norwegian Oil Industry

By 1970 the state had introduced policies which severely restricted the ability of private Norwegian capitalists to invest in the activity in the North Sea. First, no private capital was permitted to be invested directly into Statoil.[199] Second, the state restricted the allocation of licences to shut out most Norwegian private capital and special legislation was constructed to prevent speculative oil companies being established.[200] This action produced opposition from several interests. In particular, private banks and shipowners complained bitterly since they had anticipated profiting handsomely from the development of the North Sea.[201] As the *London Times* summarized, "private enterprise companies [in Norway] formed to participate in the North Sea feel that the presence of Statoil representing government interests works against them".[202] The Norwegian Shipowner's Association accused the state of using oil revenues "to turn Norway towards socialism and undermine confidence in private industry."[203]

On the whole, however, since few Norwegian capitalists hoped to benefit from direct activity in the North Sea, the

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[199] *National Resources* regarding Bill C-48, 26 March 1981, 40:55-40:56.
[200] Noreng, "Norwegian Oil Industry", 73.
[201] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 50.
[202] "Norway's Slow But Sure Approach to a State Oil Corporation", *The London Times*, 11 September 1974, 21.
[203] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 50; see also: "Statoil On Troubled Waters", *The Economist* (special survey of the North Sea) 256(6883)26 July 1975, 531-532.

government received almost a total consensus for its oil policy. Indeed, the Norwegian Federation of Industries supported the strong state role although it disapproved of using oil revenues to buy up existing industrial interests.[204]

It is important to note that oil and gas production in the North Sea is a highly capital intensive industry. Between 1970-1978 more than Kr. 40 billion ($10 US billion) has been invested. This represents just over half of the planned capital outlays when current projects are completed.[205] Although Statoil has a partnership in almost half of the licences with a percentage share ranging from 10 to 100 per cent, it has only been responsible for 12 per cent of the total capital formation.[206] For the most part the petroleum activity in the Norwegian Continental Shelf has been financed by imported capital. One survey estimates that about 90 per cent of the capital invested has been imported.[207] While there is a clear trend towards the state being responsible for a growing proportion of the capital formation, international capital will clearly play a key role in the future. This helps explain why Norway has not nationalized the oil industry.

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[204] Noreng, *The Oil Industry and Government Strategy in the North Sea*, 50.
[205] OECD Economic Surveys: Norway (January 1980), 42.
[206] Ibid., 42-43.
[207] Ibid., 43.

Statoil and Norwegian Oil Policy: 1973-1981

Norwegian oil policy following the establishment of Statoil in 1972 has reinforced the two trends that we traced from the early days of the oil regime. The commitment to moderate growth was reinforced with the publication of a government report[208] which set a ceiling on oil production. The rapidly rising price of oil promised to bring greatly increased revenues to Norway. This only bolstered domestic support for Norway's moderate growth policy since its absorptive capacity was questionable. At the same time, Norway still imported most of its oil for domestic consumption and a moderate pace promised to give the nation a secure source of supply. It is important to note that its go-slow policy may have slowed down petroleum activity more than originally estimated and thus, make it difficult to attain planned production goals.[209] In 1972, Statoil took over all of the state's earlier participation agreements. Later, two ad hoc licences were awarded which included government participation. The most important was awarded in 1973 where Statoil was given a 50 per cent share. It took full rights in decision-making but was fully exempted from exploration costs. Just as significant, while Mobil was the

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[208] Report no. 53.

[209] Morgan Davies, "Oil Activities On the Norwegian Continental Shelf", *Geografisch Tijdshrift* 14(3)1980, 210: The executive vice-President of Statoil has predicted that under current conditions a total yearly production of 60 million toe is projected for the 1980's. It is interesting to note that he concludes that a moderate policy is now no longer justified. Henrick Ager-Hanssen, "The Exploitation of Norwegian Oil and Gas", *Energy Policy* 8(2)1980, 155-160.

nominated operator, Statoil could take over as operator after ten years.

In the third licence round in 1974 the government awarded only 5 licences covering 8 blocks. Statoil's interest ranged from 50 to 75 per cent depending on the size of the field. The state introduced a new sliding royalty rate of 8 to 16 percent to maximize revenues from large finds while promoting marginal fields, and stiffened the terms of all of the new licences.[210] Eight licences covering 13 blocks were awarded on an ad hoc basis in 1976 and 1977. In each licence Statoil had a 50 per cent carried interest share with an option to increase as in the third round. On one block Statoil was named the operator with a private firm providing technical assistance.[211] The fourth round announced in April 1979 witnessed the awarding of 8 licences covering 8 blocks. A participation agreement with Statoil was made as a prerequisite for a licence where the state oil company had a minimum 50 per cent share with an option to

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[210] In addition, in 1975, Norway adopted a pricing system for assessing for tax purposes the value of petroleum produced on the Norwegian Continental Shelf. Dubbed the 'norm price' system it required that prices be based on those that could have been obtained in a free market between independent parties and was determined by a government body. This insured that the oil companies (including Statoil) would be taxed on the highest price for a barrel of oil. In addition, a special 25 per cent petroleum tax of profits was introduced to be coupled with the standard 50.8 per cent corporation tax.

[211] While this may seem as a divergence from the go-slow policy it should be noted that most of the ad hoc blocks were based along the median line with the United Kingdom where in some cases oil had been discovered on the British side.

increase its share to 85 per cent. A fifth round was announced for development of blocks north of 62′N. In January 1980 the state awarded three licences covering three blocks. In each case Statoil was the operator and had a fifty per cent share with an option to increase to 85 per cent.[212] The constant increase in state participation, royalties, and taxes, in addition to oil price rises, has promised to bring Norway substantial revenues. Early estimates that oil production would bring the state Nkr. 30 billion annually after 1980[213] have now been elevated to Nkr. 50 billion ($10 US billion) on the assumption that real oil prices remain at $30 US with an annual oil production of 60 million toe.[214]

An oil policy White Paper issued in February 1980[215] outlined the state's commitment to three principles in future Norwegian oil policy: first, state involvement in all sectors of activity; second, 'Norwegianizing' the activity; and third, maintaining freedom of action in regards to

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[212] *Barrows: Petroleum Taxation and Legislation* Report 63, 'Europe', 21: hereinafter cited as 'Barrows' with the appropriate report number. It is important to note that in June 1980, Norway announced an increase in the Special Petroleum Tax from 25 per cent to 35 per cent coupled with stiffer deduction and payment terms. It was estimated that this would bring the government share of the revenue from oil production from an average well to 82 per cent. Ibid., 22.
[213] Bjorn Skogstad Aamo, "Norwegian Oil Policy: Basic Objectives", *The Political Implications of North Sea Oil and Gas*, (eds.) Martin Saeter and Ian Smart, Oslo: Universitetsforlaget (1975), 83.
[214] OECD Economic Survey: Norway (January 1980), 48.
[215] Report no. 53.

timing of the development of Norwegian petroleum resources.[216] These goals simply reflect the development of Norwegian oil policy, particularly since 1969. Statoil's development into the key player in the exploitation of Norwegian petroleum resources underlines Norway's commitment to introduce state capital in all sectors of the industry while recognizing that there remains an important role for private international corporations. Most importantly, Statoil's broad public support reinforces the alternative of state capital to both domestic and international capital in the development of the North Sea. Barring any drastic changes, Statoil has a very bright future indeed.

The commitment to Norwegianization has increased the role for the three Norwegian oil companies and placed a greater emphasis on creating backward and forward linkages from the development of oil. Block 34/10 represents a key step in Norwegianizing the activity in the North Sea since it is to be developed solely by Norwegian interests (Statoil 85%/Norsk Hydro 9%/ Saga Petrokjemi 6%) with Exxon operating as a technical assistant. Report no. 53 hints that future licences may be constructed along these lines.[217] Norway has always been anxious to promote its own goods and services, and by 1972 their use was made a prerequisite for a licence. [218] Creating a petrochemical industry in Norway is proving

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[216] Ibid., 8.
[217] Ibid., 11.
[218] By the fourth round the prospective applicant had to prove that the company would create jobs in Norway.

more difficult because of the small domestic market, strong environmental lobby, and poor logistics.[219] The state only owns a small part of the downstream sector in Norway which is primarily controlled by Shell and Exxon. If most of Norway's oil production is refined outside of the country then part of the economic rent from downstream operations is lost.[220]

Finally, Norway's commitment to freedom of action simply reinforces the desire of the state to determine activity on the Norwegian continental shelf. This is a simple continuation of the moderate development policy adopted in the early days of Norwegian oil development.

Assessment of Statoil

A number of goals seem to be present upon Statoil's formation: first, to increase the level of Norwegian capital in the activity in the North Sea; second, to gain enough working knowledge of the industry to become an operator in order to control the rate and location of development; third, to discover and develop petroleum resources; fourth, to expand into every sector of the oil industry; and fifth, to utilize Norwegian goods and services.

The state has used Statoil as its direct investment instrument and has also promoted Norwegian private capital through Saga Petrokjemi and Norsk Hydro. By 1979 Statoil's annual investments represented 28 per cent of the total

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[219] Nore, "The International Oil Industry and National Economic Development, 183-184.
[220] Ibid., 184.

capital invested in the development of the Norwegian Continental Shelf. That Norwegian capital could have been introduced without establishing a state oil company is a possible criticism against the state. This, however, ignores two points: first, that Statoil was seen as a necessary instrument for government learning; and second, that Statoil gives the state an alternative to the international companies and increases its ability to bargain. As an alternative to the international companies, Statoil has slowly acquired the necessary technological and managerial capabilities to operate independently. With the awarding of Block 34/10 in 1980 it became the sole operator of activities. This represented a key development in the history of the exploitation of Norwegian petroleum resources since the state now had its own vehicle for exploration and development. This, of course, was a complete change from the conditions in 1962 when Phillips Petroleum first approached Norway. Up until now Statoil has participated in some of the discoveries on the Norwegian Continental Shelf but has not been successful in independently discovering new reserves. Part of the rationale behind the awarding of Block 34/10 was to give Statoil this opportunity.[221] Development north of 62′N. where Statoil is the major player will reveal a great deal about the company's technical and managerial development.

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[221] Block 34/10 is referred to as the 'Golden Block' because of its excellent potential.

A key element in Statoil's mandate was the vertical integration of the company. Statoil's success and failure in this regard reflects the relative strengths and weaknesses of Norway's position in the international oil industry. In the upstream phase, Statoil has been successful in assuming an important role in exploration since it is involved in almost half of the licenced area. Though it remains an observer of the production phase, this could change if there are commercial discoveries in Block 34/10 or in the blocks north of 62'N. In the downstream phase, Statoil has not been so successful. Yet, this only reflects a general problem facing Norway. In refining, Statoil is involved in a joint-venture with Norsk Hydro and they control 30 per cent of Norway's total refining capacity. In petrochemicals the state has concentrated its interests through Norsk Hydro. Though it is the largest petrochemical firm in Norway, it is tiny by international comparisons and ranks about 250th in the world.[222] Obviously, Norway's small domestic market makes downstream development difficult.

Finally, Statoil has been successful in utilizing Norwegian goods and services, although it difficult to assess at what cost.[223] Compared to an industry average of 15 per cent, Statoil will use almost 70 per cent of

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[222] T. Lind and G.A. MacKay, *Norwegian Oil Policies*, Montreal: McGill-Queen's University Press (1979), 64.
[223] Critics of state participation correctly point out that the cost of requiring companies to use local goods and services is just another type of domestic protection such as tariffs. Such protectionism usually produces an inefficient industrial structure.

Norwegian goods and services for the development of the Statfjord B Platform.[224] It is interesting to note that Mobil, a partner with Statoil in the Statfjord field, complained that "they were not allowed to take decisions on commercial criteria".[225] The conflict between Statoil and Mobil illustrates the necessity of a national instrument to promote the use of domestic goods and services. Thus, Statoil represents a key bargaining tool for the Norwegian government in promoting state policy.

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[224] Nore, "The International Oil Industry and National Economic Development", 188.
[225] Lind and MacKay, *Norwegian Oil Policies*, 108.

V. PETRO-CANADA

The Political Economy of Canada

The development of Canada has been dominated by two trends: continentalism, and national unity maintained through a federal system. While political unity with the United States was rejected by most British North Americans by 1840, economic continentalism was reinforced with the Reciprocity Treaty of 1854 and actively promoted by Ottawa as late as 1878.[226] The political, economic, and social diversity of British North America resulted in a compromise solution to the problem of political union: federalism.

Natural resource development has been at the centre of the evolution of the Canadian nation-state.[227] Canada experienced steady industrialization between 1910 and 1925, and following 1945. The Canadian capitalist class has been identified as a mercantile class which accumulated wealth not by production but by circulation.[228] Economic growth in Canada has resulted in the Canadian bourgeoisie being dominant in areas of the economy characterized as non-technological such as "finance, utilities,

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[226] J. Harvey Perry, *Taxes, Tariffs and Subsidies: A History of Canadian Fiscal Development* (volume 1), Toronto: University of Toronto Press (1955), 67-68.

[227] For a good overview, see: Mel Watkins, "The Staple Theory of Economic Growth", *Approaches to Canadian Economic Growth*, (eds.) W.T. Easterbrook and Mel Watkins, Toronto: McClelland and Stewart Limited (1967), 49-73.

[228] Tom Naylor, "The Rise and Fall of the Third Commercial Empire of the St. Lawrence", *Capitalism and the National Question in Canada*, Toronto: University of Toronto Press (1972), 1.

transportation, communications and real estate".[229]

Given Canada's proximity to the United States and the fact that international capital has been actively encouraged by Canadian governments to spark economic growth,[230] it is not surprising that Canada became the 'testing ground' for American multinational corporations. One author calculated that Canada has received almost 40 per cent of all investment made abroad by multinational corporations.[231] International capital in Canada, which is overwhelmingly American, is concentrated in industries which require high levels of capital investment and technological expertise. In 1972 for example, international capital accounted for almost 50 per cent of all capital expenditures in Canadian industries.[232]

The Canadian state has always played a protective role in the development of the Canadian economy because of small local markets, high transportation and overhead costs, and strong foreign competition. Both the federal and provincial governments have been involved in the transportation and

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[229] Jorge Niosi, *The Economy of Canada: A Study of Ownership and Control*, Montreal: Black Rose Books (1978), 173.
[230] Stephen Schienberg, "Invitation to Empire: Tariffs and American Economic Expansion in Canada", *Enterprise and National Development: Essays in Canadian Business and Economic History*, (eds.) Glenn Porter and Robert Cuff, Toronto: Hakkert (1973), 80-100; David Wolfe, "Economic Growth and Foreign Investment: A Perspective on Canadian Economic Policy", *Journal of Canadian Studies* 13(1)1978, 3-29.
[231] Daniel Drache, "Canadian Capitalism: Sticking With Staples", *This Magazine* 9(3)1975, 7-10.
[232] Domestic and Foreign Control of Manufacturing Established in Canada (1972), *Statistics Canada*, Ottawa (1973), Table 3, xiii.

resource sectors although one study has examined the role of the federal government in manufacturing.[233] One author estimated in 1973 that governments in Canada are responsible for almost 20 per cent of investment.[234]

Canada can be labelled as 'semi-developed' or 'semi-peripheral' since the Canadian economy is heavily dependent on international capital and resource development. If the Canadian bourgeoisie is 'weak' it is because it is dependent on international capital and is non-industrial.[235]

Energy Consumption in Canada

As Table 5.1 illustrates, oil accounted for roughly 47 per cent of Canadian energy consumption from 1960 to 1975. The structure of the international oil system and domestic oil policies made imported oil less expensive than oil produced in Alberta until 1973. Thus, Canada imported almost 50 per cent of its total consumption by 1973 as revealed in Table 5.2. The change in oil prices in 1973 which made Canadian oil much cheaper, reduced exports, as domestic production was channelled into the Canadian market. State-held investment in the Canadian petroleum industry was

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[233] Tom Traves, *The State and Enterprise: Canadian Manufacturers and the Federal Government (1917-1931)*, Toronto: University of Toronto Press (1979).

[234] John Hutcheson, "The Capitalist State in Canada", *(Canada) Ltd.: The Political Economy of Dependency*, (ed.) Robert Laxer, Toronto: McClelland and Stewart Limited (1973), 161.

[235] Niosi, *The Economy of Canada*, 173: in addition, it is important to note that regional cleveages have stunted the development of a strong national capitalist class in Canada.

less than 1 per cent.[236] By 1973, 91 per cent of the petroleum industry was controlled by international capital.[237] The major multinationals held a virtual monopoly over all aspects of the oil industry in Canada.

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236 "State Participation in the Canadian Energy Industry", *An Energy Policy for Canada: Phase 1 Volume 1: An Analysis*, issued by the Department of Energy, Mines and Resources Canada, Ottawa: Information Canada (July 1973), 179.
237 Ibid., 240.

Table 5.1: Sources of Canadian Energy Counsumption, Selected Years (percentage)

Years	1960	1965	1970	1971	1972	1973	1974	1975
Oil	49	49	48	48	47	47	46	46
N. Gas	9	13	17	17	18	18	19	18
Coal	15	13	11	10	9	9	8	8
Hydro	28	25	24	24	25	24	26	27
Nuclear	--	--	.1	.6	1	2	2	1

Source: *An Energy Strategy For Canada*, issued by the Department of Energy, Mines and Resources Canada, Ottawa: Information Canada (1976), Table 2, 161.

Table 5.2: Canada: Principal Oil Statistics (000b)

Year	Production	Crude Exports	Crude Imports	Demand
1964	275,364	101,259	143,531	383,080
1965	296,997	107,697	144,204	416,873
1966	320,467	123,691	146,077	439,873
1967	351,287	150,345	162,095	456,663
1968	435,906	180,804	177,292	491,813
1969	410,814	197,341	193,125	508,609
1970	461,177	240,894	208,335	542,386
1971	491,846	272,783	244,243	559,038
1972	560,693	348,431	288,754	591,306
1973	657,000	365,370	311,292	622,922
1974	618,675	324,850	299,300	635,142
1975	518,300	264,455	298,238	618,363
1976	475,800	139,418	198,666	638,081
1977	481,800	120,893	244,281	639,167
1978	479,975	97,052	224,600	633,868

Source: *International Petroleum Annual Statistics, 1964-1979.*

Canadian Oil Policy: 1947 - July 1973

Canada became a significant oil producer in 1947 with the discovery of commercial quantities of oil at Leduc, Alberta. From 1947 until 1973 the federal government tried to maximize Canadian oil exports to the United States. This export mentality formed the basis of Canadian oil and, energy policy, at least until 1973. Canada was integrated into the international oil system and also into a growing North American continental energy system. This produced a monopoly of private capital, primarily American, in the development of the Canadian petroleum industry. A lack of markets for Canadian oil, however, remained a chronic problem until the early 1970's.

Canadian independents asked the Diefenbaker government for protection from cheap imported oil and for extension of the oil pipeline to Montreal. Henry Borden was appointed to head a commission to study the state of the Canadian petroleum industry. The Borden Commission recommended that an artificial commercial barrier be erected along the Ottawa Valley Line and that all markets west of that line be reserved for oil produced in Alberta. The Commission also strongly recommended that the Alberta producers should agressively pursue markets in the United States. In 1961 Diefenbaker adopted the Commission's recommendations declaring the National Oil Policy (NOP). This compromise policy gave the oil producers in Alberta a guaranteed Western market with the possibility of increased exports to

the United States while leaving consumers east of the Ottawa Vally Line to benefit from cheap imported oil. The NOP, while simply reflecting the status quo, reinforced two tendencies which locked the Canadian petroleum industry into a system dominated by the seven major multinational oil corporations. First, it made Eastern Canada totally dependent on imported oil and on the multinational oil companies for supplies since no pipeline was built east of Toronto. Second, it oriented the vast majority of future Canadian oil production to the continental marketplace.

The Push to Export: 1961-1971

The period 1961-1971 witnessed a great attempt on the part of Canada to increase oil exports to the United States by integrating Canada into a North American energy market. Between 1959-1969 exports of oil produced in Alberta rose from 92,000 to 457,000 barrels a day. Alberta, however, still had over 600,000 barrels a day of shut-in capacity. With Canadian reserves steadily increasing industry journals speculated on the possibility of 'A North American Oil Policy'[238] concluding "that sooner or later a continental energy policy will emerge: for Canada's sake, the sooner the better."[239] Ottawa did everything possible to smooth relations with Washington including a dramatic effort to link the Canadian Arctic with the American market through

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[238] "A North American Oil Policy?", *Petroleum Economist* 36(2)February 1969, 44-46.
[239] Ibid., 46.

the Mackenzie Valley Pipeline.[240] In 1972, American demand for oil outdistanced domestic production and the import quotas were removed. Soon, Alberta was exporting over 1 million barrels of oil daily to the United States. It seemed that the Canadian federal and provincial governments and Washington, in concert with the major oil companies, were in complete harmony. In addition, the federal government had even taken 45 per cent of a private company faltering in the Arctic to maintain the pace of exploration with the blessing of the private sector.[241]

Ottawa Reevaluates: 1972 - July 1973

By 1972 events both outside and inside of Canada were forcing Ottawa to reevaluate its oil policy. The growing radicalism of the oil producing countries of the Middle East and North Africa focused attention on the changing structure of the international oil system which included growing state control of production and cooperation regarding prices. Public attention was focusing on the extent of foreign control of the economy and the record of Ottawa's regulatory agencies. The National Energy Board (NEB), the chief federal regulatory body, was responsible for overseeing natural gas exports. Born out of the recommendations of the Borden Commission, the NEB was export-oriented and continentalist

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[240] For a discussion of how Ottawa behaved like the government of a 'fifty-first' state, see: Edgar Dosman, *The National Interest: The Politics of Northern Development, 1968-1975*, Toronto: McClelland and Stewart Limited (1975).
[241] The Panarctic Consortium came to Ottawa looking for help, see: Elaine Dewar, "O Petro-Canada! We See Thee Rise", *City Woman* (Summer 1981), 17.

in perspective. Given a mandate to licence natural gas exports deemed to be 'surplus', it had few guidelines as to what constituted Canadian needs. What is remarkable about the NEB's performance is its lack of means to moniter independently Canadian natural gas reserves. The NEB justified Canadian exports of natural gas on the basis of information supplied by the oil industry.[242] In 1972, however, the NEB cancelled some export licences for natural gas and was given the authority to regulate oil exports. This reflected growing concern in Ottawa over the state of Canadian petroleum reserves.

Trudeau's Liberal Party narrowly escaped defeat in the 1972 election and only held onto power by forging an alliance with the New Democratic Party (NDP). The latter advocated a strong interventionist role by Ottawa in the energy sector of the economy.[243] In particular, the NDP was anxious that the major oil companies be closely regulated by the state to protect the consumer and that the state expand its role in the industry to become "the dominant and controlling force".[244] The position of the NDP closely resembled that of a variety of important Liberals who sought

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[242] For accounts of the record of the NEB and in particular the approval of the 1970 natural gas sale to the United States, see: Ian McDougall, "The Mackenzie Valley Pipeline Hearings of the NEB", *The Big Tough Expensive Job: Imperial Oil and the Canadian Economy*, (eds.) James Laxer and Anne Martin, Toronto: Press Porcepie (1976), 129-142; Eric Kierans, "The Day the Cabinet Was Misled", *Canadian Forum* (March 1974), 2-5.
[243] Larry Pratt, "Petro-Canada: Oil, Profit and the National Interest", (unpublished paper), September 1980, 9.
[244] Ibid.

to expand the role of the state to counter-balance the dominant position of large corporations in the Canadian economy As one author summarized, "[as] the NDP drew closer to the exercise of power between 1972-1974, the distinctions between its own Fabian-oriented philosophy of government planning and public ownership and the neo-Keynesian interventionism of the governing Liberals became increasingly academic."[245]

In 1970 the Department of Energy, Mines and Resources of Canada (EMR) hired Wilbert H. Hopper to examine the issue of state participation in the petroleum industry. That Hopper, who would eventually become Petro-Canada's first President and later its Chairman, was not an enthusiastic supporter of state oil companies was apparently reflected in his report to EMR.[246] Briefly, Hopper was sceptical of the process of blending public and private priorities into the mandate of the same corporation. He pointed out that governments usually used the state oil company to pursue goals that were politically-oriented and at best only partially defined. This reduces the commercial efficiency of the company. Thus, Hopper is said to have concluded "that any decision to establish such a vehicle should be made on other than grounds of economic efficiency."[247]

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[245] Ibid., 10.
[246] Dewar, "O Petro-Canada", 17.
[247] Pratt, "Petro-Canada", 12: Hooper's report has not been published.

Following the 1972 election, Trudeau ordered a major review of Canadian energy policies, subsequently tabled in July 1973. Entitled *An Energy Policy For Canada - Phase 1* (2 volumes) the report focused on the future role of the federal government in Canadian energy policy and, among other things, examined the question of state participation through Crown Corporations in the Canadian energy marketplace:

> The time is shortening for government to decide whether there are reasons of public policy for either some additional participation, or quantity change in participation, in the development of the energy sectors of Canada .... Must any decision by government to participate be based solely on economic criteria or should government become involved for reasons relating to the development of the Canadian political community, accepting commercial returns on a lower scale? Have we reached a situation in Canada where it is desirable, within the energy sector, to make a specific advance in national development rather than simply to generate a profit?[248]

The report concentrated on the prospect of the creation of a state oil company. The problems of cost and efficiency which were the main focus of Hopper's report were reflected in *An Energy Policy For Canada*. It stated that "[p]robably more than any other factor, the question of cost inhibits the creation of a National Petroleum Company (NPC) ... [and] that due to the diversity of its goals, the NPC is likely to be less commercially efficient than its competitors, and therefore not effective in playing a major role in

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248 "State Participation", 192.

maintaining or setting low prices."[249] Moreover, *An Energy Policy For Canada* focused on the problems of accountability and control which have characterized the history of other state oil companies. It claimed that the company might gain expertise which could undermine the effectiveness of the controlling agency and thus jeopardize "the objectivity essential to the successful formulation of policy and implementation of regulations".[250] *An Energy Policy For Canada* detailed the traditional arguments for direct state participation. It pointed out that a state oil company would increase government knowledge of the industry, giving decision-makers better criteria to construct oil and gas regulations.[251] It also pointed out that a state oil company would stimulate national research and development, promote the utilization of Canadian goods and services, contribute to regional development, and be a possible vehicle for state-to-state crude oil arrangements.[252] While *An Energy Policy For Canada* avoided any conclusions, the concentration on problems of cost, efficiency, control, and accountability, in the face of less tangible advantages, made the report weigh on balance against the creation of a state oil company.[253]

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[249] Ibid., 189-190.
[250] Ibid., 191.
[251] Ibid., 186.
[252] Ibid., 187-188.
[253] The ambiguity of the discussion reflected divisions within the Liberal government concerning the merits of a state oil company.

The Creation of Petro-Canada: 1973-1975

The radical changes in the international oil industry which occurred in the last four months of 1973 forced Ottawa to rethink its stand on Canadian oil policy in general and the establishment of a state oil company in particular. The ramifications for Canada were profound because suddenly the country was extremely vulnerable to the dislocations caused by events in the Middle East and North Africa. Table 5.3 illustrates the growing reliance of Eastern Canada on oil as its major energy source. By 1973 between 70 to 84 per cent of Eastern Canada's energy requirements were supplied by imported oil; a trend encouraged by the NOP of 1961.[254] The issue of security of supply brought the state to the conclusion that Canada should pursue a higher degree of self-sufficiency in energy.[255] This decision focused attention on the monopoly position of private capital in the Canadian petroleum industry and the future role of the national government.

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[254] Pratt, "Petro-Canada", 19.
[255] Ibid., 22.

Table 5.3: Consumption of Various Energy Sources by Eastern Canada: 1960 & 1975 (%)

Crude Oil	Atlantic	Quebec	Ontario
1960	70.3	64.8	52.3
1975	83.6	70.8	47.7
N.Gas			
1960	----	2.0	10.7
1975	----	5.8	28.5
Hydro			
1960	6.8	21.4	11.6
1975	13.7	22.0	14.8
Coal			
1960	22.9	11.8	25.4
1975	2.7	1.4	9.0

Source: C.D. Howe Institute, *Policy Review and Outlook (1978), A Time For Realism*, (ed.) Judith Maxwell, 115.

Ottawa's notorious reliance on the private sector for information convinced the state that it required an independent vehicle both to gather information and to stimulate development. Ottawa was anxious to accelerate exploration and development in the high-cost frontiers by using government capital in joint-ventures with private oil companies. Thus, the state hoped to further exploration and development in order to promote self-sufficiency by *complementing* the role of private capital. In this way, therefore, "[the] function of the new state enterprise would be precisely that of the tax concessions: to underwrite risk and to encourage private capital to flow into areas where it was reluctant to invest."[256]

In addition to Petro-Canada's role in the development of the high risk frontiers, the advantages of a state oil company outlined in *An Energy Policy for Canada* were also considered very important reasons for forming the company. In particular, with the oil industry undergoing radical structural changes, the prospect of crude oil being traded primarily on a government-to-government basis loomed as a likely prospect. In October 1973 Venezuela informed the Department of Energy, Mines and Resources (EMR) that it would prefer to negotiate with a Canadian state oil company regarding future supplies than a private company acting on

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[256] Ibid., 26.

behalf of Canada.[257] It is important to note that all of the arguments against the establishment of a state oil company outlined in *An Energy Policy For Canada* were not lost in the crisis situation of this period. Thus, as noted, the decision to establish a state oil company was rationalized with the immediate priorities of the federal government brought about by the changing events in the international oil industry.

The Liberals were committed in principle to the idea of a state oil company by November 1973,[258] but it was the pressure of minority government politics that accelerated the timing of the announcement. The NDP threatened to support a non-confidence vote proposed by the Conservatives if the Liberals did not scrap the NOP and draw up a new oil policy. On 6 December 1973 Trudeau outlined the new Liberal oil policy to the House of Commons: this included the establishment of a state oil company and the construction of an oil pipeline east to Montreal.[259]

An initial version of the Petro-Canada Act did not get past first reading because of the end of the minority Trudeau government. However, the Liberals returned to office with a majority in July 1974 and re-introduced the Petro-Canada Act (Bill C-8) which was given second reading in the spring of 1975. Finally, after a long, ill-tempered

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[257] "Seek State Oil Company", *Oilweek* 24(36)22 October 1973, 8.
[258] Pratt, "Petro-Canada", 15.
[259] House of Commons, *Debates*, 6 December 1973, 8478-8479.

debate initiated by the Conservatives in the committee stage, the Petro-Canada Act passed third reading and was given royal assent in July 1975.

The Mandate of Petro-Canada

Petro-Canada's mandate reflected both the immediate priorities of the state to stimulate development in the frontiers and its more long-term interest in increasing the presence of the national government in the Canadian energy marketplace. Energy Minister Donald Macdonald confirmed Petro-Canada's role in promoting Canadian energy self-sufficiency by stating that "[Bill C-8] is a most important element in the government's long-term planning to secure adequate supplies of energy to meet our national needs."[260] Focusing on the problems of developing the frontiers and the role of the private sector he continued that:

> The economic, technical and environmental problems of developing the energy resources in our geographical and technical frontiers --the north, the oil sands and the offshore-- have if anything been magnified by the passage of time .... The government does not feel assured that the private sector can be relied upon to mobilize all of the enormous amounts of capital which will be required to secure energy development consonant with Canadian needs over the longer term.[261]

While Petro-Canada's initial function was frontier exploration and development,[262] the government provided the company with an ambitious mandate that made its potential

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[260] House of Commons, *Debates*, 12 March 1975, 4036.
[261] Ibid., 4037.
[262] Ibid., 4037-4038.

growth imposing. Petro-Canada was not only designated with the authority to engage in all aspects of the petroleum industry,[263] but also in all other types of energy.[264] Thus, Ottawa was provided with a vehicle for future participation in all sectors of the Canadian energy marketplace. The mandate of Petro-Canada included cultivating the inherent advantages of a state oil company as outlined in *An Energy Policy For Canada*.[265] It should be clear that Petro-Canada was viewed as a supplement to the private sector and not as a replacement. Thus, the claim that "[Petro-Canada] is to work with the private sector not to replace it; to complement and supplement the activities of private companies in areas that are particularly important to the national interest."[266]

Government Organization

In creating a Crown Corporation with such a broad mandate the federal government was anxious to keep Petro-Canada responsible to the state. *An Energy Policy For Canada* focused on the problems of accountability and

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[263] Bill C-8, Petro-Canada Act, Section 3.
[264] Ibid., Section 6.
[265] Macdonald viewed Petro-Canada as an instrument to increase economic rents, promote state-to-state trading of oil, gather information, introduce Canadian capital into the national petroleum industry, utilize Canadian goods and services, and organize joint-ventures: House of Commons, *Debates*, 12 March 1975, 4036-4039.
[266] Maurice Strong, "Canada's Energy Future: The Role of Petro-Canada", (notes for a speech), House of Commons, Proceedings, Minutes and Evidence of the Standing Committee on *National Resources and Public Works*, 19 April 1977, Appendix, 17A:10: hereinafter cited as 'Natural Resources' with the appropriate specific information.

control. The state sought to integrate Petro-Canada into a hierarchical structure where the controlling agency was stronger than the company having both the legislative capacity and technological expertise to keep the company in check. Petro-Canada is directly responsible to the Department of Energy, Mines and Resources, the company's sole shareholder. EMR is responsible for the overall management of Canadian resources and in particular for establishing energy policy. This Ministry is responsible to the Cabinet and Parliament which gives both those bodies some indirect control over the state oil company. As will be discussed later, the Minister of Finance and the President of the Treasury must approve the capital budget and, the Minister of Indian and Northern Affairs issues licences on Canada Lands.

There are two sections of the Petro-Canada Act which give the state an important measure of control over the operations of the company. First, Section 7(2) states that Petro-Canada is required "[to] comply with such policy directions as may from time to time be given it in writing by the Governor-in-Council."[267] This provision gives the Cabinet the authority to overturn decisions by Petro-Canada's Board of Directors by issuing an Order-in-Council.[268]

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[267] Bill C-8, Petro-Canada Act, Section 7(2).
[268] It is significant to note that this clause was amended due to pressure from the Conservatives. The original wording would have permitted the Minister to intervene at any point in the company's operations without a published directive:

[268] It provides the state with an effective tool for instructing Petro-Canada to perform particular functions. In addition, since the directive must be published, the government remains more accountable to Parliament while providing Petro-Canada with public directives for operations which may not meet the company's commercial priorities.[269] This method of 'steering' has been used twice in Petro-Canada's history.

Second, Section 7(3) states that Petro-Canada must submit its capital budget for approval three months in advance of each fiscal year to the Ministry of Energy. Only after this approval does the state oil company receive the authority to meet the commitments on capital in its budget. This budget report includes all capital expenditures, future year expenditure commitments and proposed financing. In addition, the Minister may request similar information regarding the company's subsidiaries. While this may seem as only sensible policy, it is critical to note that this budgetary procedure is atypical in the course of relations between the Canadian state and most of its Crown Corporations. As a senior legal advisor in EMR commented:

> In this particular bill that we have got before us we have gone beyond what have in the past been the requirements for the submission of capital budgets. In this particular case a new step has been taken .... The capital budget goes through the same procedures [as other crown corporations], but only when it is approved does the company have the

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[268](cont'd)*National Resources*, 3 June 1975, 33:5; 4 June 1975, 34:24.

[269] Pratt, "Petro-Canada, 50-51.

> authority to meet the commitments or expenditures on capital .... This is a much tighter control than has existed ... in the past.[270]

Government control over Petro-Canada's annual budget provides the state with an effective instrument for controlling the corporation's growth. At the same time it formalizes relations between the government and the company. Such a procedure helps to integrate Petro-Canada into the federal bureaucracy. When the Conservatives were briefly in power between 1979-1980 they utilized this control mechanism to trim Petro-Canada's budget.[271]

Legal Structure of Petro-Canada

Petro-Canada is organized as a joint-stock company where the state owns all of the shares. This structure reinforces government control of the state oil company. As its major shareholder it can exercise direct influence by appointing Petro-Canada's Board of Directors and by approval of the Chairman and President. The state has tended to strike a three-way balance in appointments to the Board between its own Deputy Ministers, company officers, and private-sector representatives.[272]

Despite our discussion, it would be a mistake to suggest that the government has a stranglehold over the company. The state tried to strike a balance between the public and private side of the company when drafting Bill C-8. As Energy Minister Macdonald commented:

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[270] *National Resources*, 24 April 1975, 15:17.
[271] "Petro-Canada's 1980 Budget Set", *Oilweek* 30(49)14 January 1980, 8.
[272] Pratt, "Petro-Canada", 52.

> We have chosen to set the National Petroleum Company in a corporate business framework as a means to better achieve our goals. In its organization and business methods, the company will be subject to the basic disciplines of an operating statement and balance sheet. The corporation will be responsible to its shareholders, the people of Canada. I think the directors of the company may from time to time judge that short-term profit maximization is not in the interests of these shareholders.[273]

The controls given to the state over Petro-Canada were balanced in the legislation which gave the company's officials extremely broad and diverse discretionary powers. Section 7(1) empowers the Board to do "such things as it deems expedient for or conducive to the furtherance of the objectives of the Corporation, within or outside of Canada". [274] This latitude, which would only be normal for a private company, coupled with Petro-Canada's broad mandate, seems to offer the company an important degree of independence in its operations. As Macdonald commented, "[on] day-to-day decision-making ... clearly the Corporation will be making its own decisions."[275] In 1977 Maurice Strong, then President of Petro-Canada, stated that "Petro-Canada applies to its business decisions the same kind of rigorous profitability criteria that any private company would

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[273] House of Commons, *Debates*, 12 March 1975, 4037.
[274] Bill C-8, Petro-Canada Act, Section 7(1).
[275] *National Resources*, 4 June 1975, 34:25: Regarding Petro-Canada's future spending policy, a sore point with the Conservatives, Macdonald reiterated Petro-Canada's independence by indicating that once the government had laid down the general parameters it was left to the company to decide on the best method to act. *National Resources* 20 May 1975, 27:6.

apply".[276]

Financial Structure of Petro-Canada

Petro-Canada was given a broad range of financial powers which matched its broad mandate and commitment to consideration of the 'bottom-line'. First, the Petro-Canada Act provided for an appropriation of $1.5 billion which was intended to see the company through its first 5 to 7 years. Funding beyond $1.5 billion (expected to run out in 1982) needed the approval of Parliament.[277] Second, Petro-Canada was given the power to raise equity through its subsidiaries by selling shares in particular ventures. Third, the company was given extensive powers to raise debt capital where the Minister of Finance could guarantee the company's debt.[278] Moreover, designated as 'an agent of Her Majesty', the company can acquire capital at a lower cost.[279] Finally, Petro-Canada can acquire the assets of other oil companies. These broad sources of finance gave Petro-Canada the necessary financial status to grow into a major player in the Canadian oil and gas industry. In particular, the ability of the company to acquire lower cost capital coupled with government guarantees, allowed the state oil company to maintain a high debt/equity ratio crucial to the type of development Ottawa had intended. It is important to note

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276 Strong, "Canada's Energy Future", 17A:4.
277 The new Energy Security Act to be introduced in the fall of 1981 authorizes an increase in Petro-Canada's capital budget to $5.5 billion.
278 Pratt, "Petro-Canada", 57.
279 Ibid., 57-58.

that although the state has important budgetary controls, once Petro-Canada begins to generate high levels of internal capital, the control functions may be strained.[280]

Public and Private Capital in the Canadian Oil Industry

Prior to the establishment of Petro-Canada, state-held investment in the Canadian petroleum industry was less than 1 per cent.[281] The virtual monopoly of private capital was a product of both federal and provincial policies designed to promote extensive investment of private capital in the Canadian petroleum industry. Of the 99 per cent interest held by private capital over 90 per cent was controlled by international capital. The Canadian capitalist class, historically confined to non-technological and non-capital intensive sectors of the economy, did not invest heavily in the Canadian petroleum industry.

When Ottawa proposed to set up a state oil company with a broad mandate and financial resources to match, the reaction of the industry was mixed. Commenting on Ottawa's intention of using Petro-Canada as a 'window on the industry', the industry journal *Oilweek* sarcastically commented that by direct participation the state oil company "might just provide that 'insight' that is so pitfully lacking."[282] At the same time, however, many companies accepted Petro-Canada's establishment as inevitable, and some even welcomed its additive influence. What the industry

[280] Ibid., 59-60.
[281] "State Participation", 179.
[282] "Now It Can Be Told", *Oilweek* 26(6)24 March 1975, 3.

feared was any preferential treatment for the state oil company.

Petro-Canada and Canadian Oil Policy: 1975-1981

Petro-Canada's short-term history can be divided into four distinct periods: 1) the push to the frontiers 2) entrepreneurial activities 3) the Conservative interlude with the prospect of privatization and, 4) the introduction of the National Energy Program (NEP) with an expanded mandate for Petro-Canada. In the first two years of the company's history Petro-Canada moved rapidly to fulfil its mandate as a catalyst for exploration and development in the frontiers. In the spring of 1976 Petro-Canada took Ottawa's 15 per cent interest in the Syncrude Oil Sands venture and its 45 per cent interest in Panarctic Oils Limited. In August 1976 Petro-Canada purchased Atlantic Richfield Canada Limited which gave the state oil company a small internal cash flow and, more importantly, a core of industry management. This gave the company actual operating capacity.[283] In 1976 EMR published *An Energy Strategy For Canada: Policies For Self-Reliance* which reinforced Ottawa's interest in developing the frontiers.[284] The Canada Land Act was revised to give the state oil company preferential treatment on Canada Lands. In particular, Petro-Canada was given first access to 25 per cent of Crown Lands and more importantly, a 'back-in' option to acquire up to a 25 per

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[283] Pratt, "Petro-Canada", 61-62.
[284] Ibid., 66.

cent interest on some leases held by private companies.

Petro-Canada's investment patterns clearly reflect the priorities of Ottawa's energy policies. Nevertheless, the company's heavy investment in the frontiers, which offered little prospect of early returns, left the company in an extremely vulnerable position. By 1978, the company was only able to finance 30 per cent of its high capital expenditures from its own operations.[285] It was clear that Petro-Canada needed to solidify its position by broadening activities into less high-risk areas of the industry. At the same time, the Liberals were in political trouble as all polls indicated a Conservative victory at the next election. This underlined Petro-Canada's vulnerability as the Conservatives had openly vowed to dismember the state oil company.

In November 1978, following Cabinet approval, Petro-Canada began to acquire control of Pacific Petroleums. The strategy behind the Pacific purchase was to create a larger internal cash flow which would be used to acquire financing instead of relying solely on government sources.[286] The industry reacted bitterly to the Pacific purchase claiming that it "was disappointed in the changed role of Petro-Canada"[287] and that the acquistion could not be justified "other than in the name of nationalization."[288] Thus, on the eve of the victory of the federal Conservative

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[285] Ibid., 76-77.
[286] Ibid., 81.
[287] "Petro-Canada's Status Unclear", *Oilweek* 29(41)20 November 1978, 11.
[288] "A Costly Window", *Oilweek* 29(41) 20 November 1978, 3.

Party, Petro-Canada was the largest Canadian controlled company in the petroleum industry with assets of $3.3 billion.

As noted earlier, the federal Conservative Party was always anxious to privatize Petro-Canada. In Conservative leader Joe Clark's words, Petro-Canada has got "the government into something where it should not be."[289] Once in power, however, Clark was faced with a variety of dilemmas associated with the privatization of the company. In particular, transferring Petro-Canada's holdings represented enormous costs.[290] In addition, given Petro-Canada's strong performance as a supplement to the industry in the frontiers, the Conservatives were wary of dismantling the only government-controlled vehicle for direct participation. These problems, compounded by the strong public support for the state oil company, forced a virtual about-face by the Conservatives. Even the conservative oil industry journal *Oilweek* conceded that "it would be pushing the clock backward if Canada disbanded Petro-Canada."[291] Following their defeat in Parliament in December 1979, the Conservatives advocated strengthening Petro-Canada. This about-face is remarkably similar to relations between BNOC and the British Conservative Party

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289 House of Commons, *Debates*, 2 February 1978, 2478.
290 A task force estimated that the cost would be as high as $4.5 billion: Pratt, "Petro-Canada", 86.
291 "Which Way Petro-Canada", *Oilweek* 30(19)18 June 1979, 3.

led by Margaret Thatcher.[292] It would appear that the priorities of the state dictated the priorities of those in power regardless of their ideological foundations.

The return to power of the Liberals was accompanied by a promise to expand the role of the federal government in the Canadian petroleum industry and to strengthen Petro-Canada. With the publication of the NEP in October 1980 the Liberals kept their pledge. Ottawa's continued expansion as the key state actor in the Canadian petroleum industry was the cornerstone of the NEP. Briefly, the NEP established an incentive programme which strongly favours exploration and development on Canada Lands where the federal government holds total control over resource development. Moreover, the incentive programme is to be administered entirely through a Petroleum Incentives Board run by the federal government. It should be noted that by concentration on developing federal lands, one of the NEP's unstated long-term goals is probably to balance the strong position now enjoyed by Alberta as Canada's major oil producing province.

Petro-Canada's presence on federal lands was reinforced with changes in the Canada Lands Act proposed in Bill C-48. Briefly, the proposed changes give the Crown a 25 per cent carried interest on all federal lands which may be exercised by Petro-Canada or another agency of the national

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[292] "The Tories Are Learning to Love BNOC", *The Economist* 271(7084)9 June 1979, 111; "Tory U-Turns In the North Sea", *The Economist* 272(7098)11 August 1979, 93-94.

government. Not surprisingly, the industry has reacted strongly against Bill C-48 citing Petro-Canada's back-in rights as "confiscatory ... and a breach of faith."[293] The NEP also addressed the problem of foreign control by establishing as a major goal of the program the increase of Canadian ownership in the industry to 50 per cent by 1990. Accomplishing the goal of 'Canadianization' through expansion of the state-owned sector of the Canadian petroleum industry was an important part of the NEP:

> The government believes that a larger national public sector presence in oil and gas is the only equitable way to meet quickly our goal of increased Canadian ownership. Judging from the results achieved to date by Petro-Canada, it is also an effective way of encouraging the rapid energy development necessary to meet with our security needs. For these reasons, the Government of Canada intends to acquire several of the large oil and gas firms.[294]

In February 1981, Petro-Canada announced the acquistion of PetroFina Canada Limited for $1.46 billion to be paid in part by a special 'Canadian ownership' tax on gasoline. PetroFina was chosen in part because of its strong downstream position. In particular, it had a string of over 1,000 retail outlets east of Manitoba which complemented Pacific's 500 retail outlets in the West. This transformed Petro-Canada into a coast-to-coast integrated company with Petro-Canada signs replacing Pacific signs in the west and PetroFina signs in the east. The state corporation enjoys

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[293] *National Resources* (respecting Bill C-48), 4 March 1981, 32:2.

[294] Department of Energy, Mines and Resources, *The National Energy Program 1980*, (October 1980), 51.

wide popular support (an August 1979 poll published in the *Calgary Herald* showed that 81 per cent of Canadians favoured retaining Petro-Canada)[295] and in many ways is a symbol which carries enormous political advantages for the national government. Petro-Canada provides the state with a visible alternative to the foreign-owned multinational oil corporations. Petro-Canada officials boasted of a 15 per cent increase in sales which was 3 times the industry average.[296]

Assessment of Petro-Canada

Petro-Canada's initial mandate was to act as a catalyst for exploration and development in the frontiers. An analysis of Petro-Canada's capital expenditures reveals that it spent a disproportionate amount of capital there. Petro-Canada spent $330 million in the frontiers by 1980 which represented almost 60 per cent of its total exploratory budget.[297] This compared with an industry average of 19 per cent.[298] Petro-Canada's spending in the frontiers represented over 12 per cent of total industry expenditures compared to less than 3 per cent in Western Canada.[299] The company participated in 72 of 130 frontier wells drilled between 1976-1980 operating in joint-ventures

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[295] "Petro-Canada Gets Support", *Calgary Herald* 29 October 1980, C 4.
[296] "Patriotism At The Pumps", *Edmonton Journal*, 12 February 1981, B5.
[297] Andrew Janisch, President and Chief Operating Officier of Petro-Canada, *Notes for an address to the Canadian Gas Producers Association*, (12 March 1981), 3.
[298] Ibid.
[299] Pratt, "Petro-Canada", 73.

with private companies or as the sole operator.[300] In the offshore activity off the East Coast, where Petro-Canada has significant land holdings,[301] the company provided between 30 to 50 per cent of East Coast exploratory costs.[302] Petro-Canada participated in the significant Hibernia discovery of 1979 and in further discoveries during the 1980 drilling season. In the Arctic, Petro-Canada has provided close to 80 per cent of the financing for the exploration programme of Panarctic Oil since 1978.[303] It has participated in three of the most important Arctic finds at Whitefish, Char and Skate. The Whitefish structure is now believed to contain 64.5 billion cubic meters of natural gas.[304] Reflecting on the waning interest of the private sector in the activity in East Coast and the Arctic, a company official claimed that the discoveries would not have been made within the same time-frame without Petro-Canada's additive influence.[305] In the development of heavy oils from the Tar Sands, the company has stimulated research and development. In 1980, Petro-Canada completed a $10 million research facility at the University of Calgary. Petro-Canada's research expenses have jumped from $125,000 in 1978 to over $1,100,000 by 1980.[306] Petro-Canada, therefore, has aggressively pursued its initial mandate as a

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[300] Janisch, "Notes", 3.
[301] *Petro-Canada Annual Report (1980)*, 8.
[302] Janisch, "Notes", 3.
[303] Ibid., 8.
[304] *Petro-Canada Annual Report (1980), 10.*
[305] Ibid., 4-5.
[306] *Petro-Canada Annual Report(s)(1978); (1980)*, 20; 30.

catalyst in the frontiers. Acting both in joint-ventures and as an operator, the company has become a leader in the development of risk projects.[307] By stimulating development in the frontiers, Canada's goal of self-sufficiency in oil and natural gas seems likely. In fact, one company official predicted that "Canada should be in a position to export oil during the 1990's and onward."[308]

While Petro-Canada's performance has been judged as successful, at least one criticism must be made of Ottawa's concentration on the development of the frontiers. As one commentator pointed out, "[we] must ask whether Canadian energy policies are not now exclusively biased in favour of early frontier development and whether these policies do not favour the exploitation of high-cost resources relative to lower-cost alternatives."[309] Critics of state participation argue that government intervention introduces inefficiencies in the allocation of resources. They claim that resources are brought onstream both too early and at higher recovery cost than the market system would allow. This results in serious misallocations. The most obvious example in the Canadian context is the Arctic Pilot Project designed to bring Arctic LNG by way of tanker to eastern Canadian and

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[307] John Saul, "The Slow Destruction of Petro-Canada", *A Speech Given to Lunch*, (15 November 1979), 2.
[308] Robert Meneley, Group Vice-President of Exploration (Petro-Canada), *Notes for an Address to the Petroleum Society of the Canadian Institute of Mining and Metallurgy*, (12 May 1981), 10.
[309] Pratt, "Oil and State Enterprise: Assessing Petro-Canada" (unpublished paper): July 1981, 35.

foreign markets. With substantial natural gas reserves in Western Canada, however, critics claim that the project is a waste of public funds. Petro-Canada has played a central role in lobbying in Ottawa for support for the project by advocating LNG exports.[310] While successful completion of the project would be very profitable for the company and increase its independence, there is an obvious blurring over what is best for Canada and what is best for Petro-Canada. State oil companies, like most public firms, often develop their own priorities which do not necessarily conform to the national interest. It is questionable whether any controlling mechanism can steer around this problem.

In addition to its activities in the frontiers, Petro-Canada was utilized by Ottawa to secure imports from Mexico in 1980 and it aggressively explored in Western Canada. The company participated in 176 exploratory wells which resulted in important additions to traditional Canadian supplies. It is critical to note that the company's success ratio in Western Canada was as good as the industry average.

Petro-Canada was also established to strenghten Ottawa's bargaining position by providing a 'window on the industry'. While this is difficult to quantify, two points can be made. First, the publication of the NEP represented a major attempt by Ottawa to restructure the industry. As the NEP summarized, "[such a programme] must establish the basis

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[310] Ibid., 38.

for Canadians to seize control of their own energy future."[311] In many ways the NEP reflected the growing confidence of the federal government in energy policy. This has been marked a rapid increase in the power of EMR within the federal bureaucracy since 1970. Second, Petro-Canada's 1981 capital budget was doubled to $900 million in the face of a capital strike by the industry following the publication of the NEP. This reflects how a state oil company provides the state with an alternative to private capital and consequently, increases its bargaining power.

The NEP represents an expanded mandate for Petro-Canada. It will play a key role in the redistribution intended by the NEP: shifting activity to Canada Lands and the benefits of future development to Canadians.[312] The obvious thrust of the NEP is to encourage future investment in exploration and development in the Canadian oil and gas industry in Canada Lands away from the traditional areas in Western Canada. As noted earlier, Petro-Canada is viewed by Ottawa as a key instrument for encouraging investment in the frontiers. Petro-Canada was also given a central role in the proposed Canadianization of the industry. The NEP reflects the federal government's intention of expanding its position in the Canadian oil and gas industry at the expense of the provinces and the industry: this will only reinforce Petro-Canada's growth. In addition, the increasing

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[311] NEP, 2.
[312] Pratt, "Petro-Canada", 90.

importance of state oil companies in the international oil system will reinforce the company's rapid growth.

All of this poses some important questions regarding efficiency, accountability and control. Petro-Canada's rapid growth could introduce some important inefficiencies. First, the company will likely occupy an increasingly dominant position in most sectors of the Canadian petroleum industry. This might result in a situation where its interests will link inceasingly with the larger corporations reinforcing the current oligopolist situation in the Canadian oil industry. Second, the company's rapid growth threatens to spread company management very thin. This will put increasing pressure on top company officials to manage the firm efficiently. Third, the use of the Canadian Ownership Account[313] to pay for the acquistion of other companies "shields the company from the discipline of economics"[314] since it does not have to rely on its own funds.

Petro-Canada's development in the next decade promises to be enormous if only on the basis its current position. In the fall of 1981 Ottawa intends to increase the company's capitalization from $1.5 billion (authorized in 1975) to $5.5 billion. The company faces enormous development costs as it brings its successful wells in the offshore and the Arctic onstream. Petro-Canada's 25 per cent back-in right

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[313] The Canadian Ownerhsip Account is a special tax on gasoline which goes into a fund to pay for public ownership.
[314] Ronald Anderson, "Petro-Canada Growth Plan May Invite Inefficiency", *The Globe and Mail*, 11 February 1981.

will greatly increase its land holdings and where successful drilling has taken place, greatly increase its revenues. Moreover, Petro-Canada's revenues will be very significant because most of its discoveries are on Canada Lands which will receive the world price.[315] For example, in the Hibernia field which will probably produce 400,000 barrels a day by 1985, Petro-Canada has a fifty per cent interest. At over $40 a barrel it does not take much figuring to illustrate how wealthly the company could become. In fact, the biggest issue in the next decade might be the division of revenues between the federal government and Petro-Canada. This situation is similar to developments in Norway.

Petro-Canada's expansion will probably put pressure on the budgetary controls of the state. As the company occupies an increasingly important position in both the development of the economy and guaranteeing the energy security of the country, it is unlikely that the state will do much to restrict its development. Consequently, company officials might concentrate on short-term profit maximization avoiding the more costly ventures which are part of public policy. Thus, while Petro-Canada's history seems to have confirmed the confidence of Ottawa to use the company as tool of public policy, the company's new mandate will probably put serious pressures on the ability of the state to control the company in addition to introducing important efficiency

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[315] This is because oil developed in the frontier areas has been marked at the world price by Ottawa.

problems.

VI. SUMMARY AND CONCLUSION

This thesis has been concerned with two questions: 1) the reasons why the state chooses to establish a state oil company and 2) the issues that this trend poses. In regards to the former, it has been argued that the structure of the oil industry and the nature of the commodity do much to account for the establishment of state oil companies. In particular, it was pointed out that the structure of the industry often frustrates national priorities which are a product of unique political and economic factors. This seems to lead the state to intervene directly with the establishment of a state oil company. In regards to the latter question, the issues of efficiency, accountability, and control were examined in the three case studies. From the examination of these issues, some conclusions will now be drawn.

The Oil Industry, the State and State Oil Companies

The second chapter consisted of an analysis of the evolving structure of the international oil system. Two features stood out: 1) the dominance of a few, large multinational corporations and 2) the growing role of state oil companies. The major multinationals had the necessary capital, technological and mangerial expertise to dominate the international oil industry. They established horizontal and vertical linkages giving them a virtual monopoly over every sector of the industry which created high barriers to entry. Moreover, the majors had the full diplomatic, and

sometimes, financial support of their home governments. Events during the seventies, however, loosened the majors' tight control over the international oil system. By 1973, they lost control over pricing and production and by 1979, they lost some control over marketing. The analysis suggested that the structure of the oil industry had evolved significantly between 1955 and 1980. The major conclusion was that state oil companies had become a critical force in the international oil system.

It is important to note, however, that even with the changes in the international oil system, which were labelled as radical, the industry has in many ways remained the same: in particular, the majors have retained their strong position. First, since 1974 the majors' profits have grown tremendously.[316] Second, an analysis of their crude oil position would reveal that some still have preferential and secure access to supplies. Third, some of the traditional features of the industry --high levels of capital investment, technological and managerial expertise-- have not changed and, remain the majors' strongest suit. Fourth, the majors' still enjoy important political support from their home governments, particularly Washington. Thus, the barriers to entry remain significant. It should also be pointed out that the politicization of oil has probably reinforced the continued growth of state oil companies.

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[316] "USA Oil Companies: Earnings Soar To Record Levels", *Petroleum Economist* 47(3)1980, 123-124.

In each of the three case studies there was a brief discussion of the political-economy of each country which focused on the nature of the local capitalist class, the extent of international capital investment and the historical role of the state. The conclusion was that Brazil, Norway, and Canada could all be defined as semi-peripheral or semi-developed. This provided a foundation for the analysis of the development of oil policy in those countries. In each case the local capitalist class was unable or unwilling to invest in the development of petroleum resources. Given the high barriers to entry indigenous capitalists lacked both the necessary capital and technological expertise, and looked elsewhere to invest. In both Brazil and Norway, the local capitalist classes did not respond to state efforts to promote their role in the exploration and development of local petroleum resources. In Brazil prior to 1930 and between 1945-1947, the national capitalist class was unable to capitalize on the opportunity to fill a vacuum in the industry which probably would have given it a monopoly position. In Norway, the state actively encouraged local capital between 1965-1970 but its dismal response actually led the state to restrict local capital in the North Sea by 1971. In Canada, dominant sectors of Canadian capital lacked any position in the Canadian oil and gas industry and what local capital was invested was too small for the high-risk frontiers. These developments, which are intimately connected with the structure of the industry,

were part of the reason why all three of these governments decided to establish a state oil company. As Petter Nore argues in the Norwegian context, "[the choice had to be made] whether accumulation of capital should be undertaken by the ... state or by international capital, once it was clear that ... national private capital was not able to undertake the task by itself."[317]

In each of the three case studies there was a discussion of national energy supply and demand and, in particular, the role of petroleum. This discussion was important for analyzing the unique factors behind the development of oil policy in each of the three studies. Brazil's constant dependence on imported oil helps explain the early interest of the state in accelerating local exploration and development. Norway's low demand for oil helps explain the interest of the state in slowing down development of the North Sea. Finally, Eastern Canada's dependence on imported oil and Ottawa's fears regarding security of supply helps explain why the federal government sought to accelerate exploration and development in the frontiers. It is important to note, however, that no general feature can be delineated from our discussion of the patterns of national supply and demand which accounts solely for the establishment of state oil companies: both importing and exporting countries establish state oil companies.

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[317] Nore, "The International Oil Industry and National Economic Development", 193.

Each case study was constructed in a similar chronological fashion in order to trace the development of national priorities in oil policy. Briefly, Brazil was anxious to explore quickly to develop local petroleum resources. Norway was anxious to maximize the economic advantages and minimize the political, social and environmental disadvantages of North Sea development. Canada hoped to move towards energy self-sufficiency by accelerating the timing of development of the frontiers and thereby to increase the state's knowledge of the extent of Canadian energy resources. In each case, however, these priorities were in danger of being frustrated by the structure of the industry. In Brazil, traditional barriers to entry locked out the local capitalist class. The importance of oil to national economic development and security excited nationalist passions when it became clear that the few, large foreign-owned corporations, which dominated the industry, might be relied upon to explore and develop Brazilian petroleum reserves. With the rejection of international capital and the inability of the local capitalist class to develop Brazilian resources, the state was led to the decision to form a state oil company if its priorities in oil policy were to be met. In Norway, the weakness of the local capitalist class resulted in little Norwegian capital investment and a dominance of international capital. The state introduced government participation up to 39 per cent on new licences but,

following important discoveries by 1969, the dominance of international capital threatened to undermine Norway's ability to control activity in the North Sea. Thus, the dominance of international capital and the weakness of the local capitalist class led the state to establish a state oil company if its priorities were to be met. In Canada, the decision to promote energy self-sufficiency by exploring and developing the frontiers resulted in a separation of the priorities of the state and those of the private sector. The state was confident that neither local nor international capital could be relied upon to develop Canadian energy resources according to the national interest as defined by Ottawa. The local capitalist class was both too conservative and too small for the task while the international firms probably had better investment opportunities elsewhere. Thus, the state was led to the decision to establish a state oil company if its national priorities were to be met. Consequently, in all three case studies, it appears that the structure of the oil industry frustrated national priorities and eventually led the state to establish a state oil company.

It must be re-emphasized that the importance of petroleum to national economic development and security plays a key role in focusing state attention on the industry in the first place. Obviously, we cannot argue that whenever the national priorities of a country seem threatened, the state will react by establishing a public corporation. When

the government is dealing with a resource critical to the development of the nation, however, the response suggested in our analysis of state oil companies is likely. Finally, it must be noted that ideology and local politics are crucial variables in the establishment and evolution of state companies, just as they are crucial in the formulation of national oil policy. This has been emphasized throughout the study, in addition to the claim that the structure of the industry and the nature of the commodity leads the state in many circumstances to become directly involved through a state oil company.

Efficiency, Accountability and Control

In the introduction there was a discussion of some of the problems raised in judging the efficiency of public corporations since they lie somewhere between private companies and instruments of public policy. A partial answer to this problem is to examine the company's performance in light of its mandate and response to new initiatives. The assessment of Petrobras was critical of its performance in exploring for and developing Brazilian petroleum resources, while its performance in making Brazil self-sufficient in refining was seen as successful. The assessment of Statoil focused on the quick growth of the company to operator status, its strong role north of 62′N. and, its successful utilization of local goods and services. In the case of Petro-Canada, it was concluded that the company accelerated discoveries in the Arctic and the offshore, while

stimulating research in the Tar Sands. In addition, the strong stand adopted by Ottawa with the publication of the NEP was in part attributed to Petro-Canada's presence in the industry.

This method of assessing efficiency, however, is insufficient. Clearly, at least one question remains: how is the performance of a state oil company measured in terms of actual cost? As noted in the introduction, it is probably unwise to evaluate a state oil company's performance simply on the return on capital since such companies are usually instructed, if not established, to operate in high risk areas or pursue policies which do not conform to the commercial priorities of private firms. If profitability is rejected as the criterion for success then a host of other factors must at least be considered. Some of these include: 1) how is the value of the money spent financing a state oil company in lieu of more traditional government responsibilities such as education and health assessed? 2) how are the economic spinoffs of state oil companies assessed? 3) how is the impact of a state oil company on future government oil policy assessed? 4) how is the impact of a state oil company on the environment assessed? 5) what would the political costs be to a nation (such as Brazil) that did not establish a state oil company? Obviously, rejecting the definition of efficiency as the return on capital greatly complicates this issue. Consideration of all of the factors just listed would require, among other

things, detailed data and some dubious evaluation of intangibles. For the time being, therefore, it is probably necessary to analyze the performance of a state oil company by focusing on its mandate and how it cultivates its inherent advantages. Clearly, 'efficiency' needs to be defined according to the context in which it is being used. In this case a good definition probably lies somewhere between the two extremes suggested by critics and advocates of state oil companies.

In the introduction two 'single steering' methods for controlling a public corporation were outlined. The first could be labelled the 'institutional' or 'bureaucratic' method since the intention is to integrate the public firm into the government hierarchy. This was analyzed in the three case studies during the discussion of 'government organization' and 'legal structure'. In the case of Petrobras, it was evident from our discussion that the relationship between the state, the controlling agency (CNP) and the company was fractured and poorly defined. Two problems stand out in particular: 1) that the centralization of power in Petrobras made it increasingly autonomous from the state and the CNP and 2) that Law 2004 did not establish a controlled relationship between the state, the CNP and Petrobras. In the case of both Statoil and Petro-Canada, it is clear that the relationship between the state, the controlling agency and the company was highly structured and clearly defined. Two characteristics stand out in

particular: 1) that state control was reinforced by direct authority of the government through the Board of Directors and 2) that the controlling agency had both the competence to scrutinize and had a 'controlled relationship' with the state oil company.

The second steering method mentioned in the introduction could be labelled the 'financial' method because the intention is to regulate the public firm through budgetary controls. This was examined in the three case studies during the discussion of 'financial structure'. In the case of Petrobras, it was clear that the state sought to emphasize the 'private side' of the company by making it independent of the government budget. This, coupled with the lack of institutional control, probably accounts for the company's uncontrolled development by 1964. In the case of Statoil, it was clear that the state's financial leverage had weakened by 1978 with the decision to permit Statoil to raise its own debt capital. It remains to be seen, however, whether Statoil or the state will get the lion's share of the revenues from oil. Finally, in the case of Petro-Canada, the state tried to balance the strong financial powers of the company with budgetary controls. It remains to be seen, however, how the company's growth will affect the ability of the state to scrutinize the company.[318]

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[318] Strict financial control was the system adopted by the British to maintain control of the British National Oil Corporation (BNOC) established in 1975. BNOC is not allowed to dispose of its own earnings and must funnel all of its funds through a special Oil Account at the Treasury. In

[318] In addition, as in the case of Statoil, the division of future revenues between the state and Petro-Canada will greatly effect the company's development.

From this discussion some conclusions can be drawn in terms of the institutional and financial methods of control. First, there should be a direct line of authority running down from the government through the controlling agency to the state oil company. Second, the controlling agency should have both the legislative authority and the technical expertise to scrutinize the state oil company. Third, the state should establish a controlled relationship between the controlling agency and the state oil company by detailing how the latter is to report to the former. Finally, some budgetary controls are desireable since they give the state some control over the allocation of public funds.

It would be incorrect, however, to suggest that the combination of institutional and financial methods is a recipe for strict state control of public enterprises. As governments grow and enter increasingly specialized fields, the ability of institutions such as the Norwegian Storting and the Canadian Parliament to scrutinize either public enterprises or the controlling agencies is increasingly limited. This problem is compounded when both the controlling agency and the public firm share similar goals:

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[318](cont'd)theory, this arrangement gives the Treasury the opportunity to totally control BNOC. In reality, however, BNOC has shown itself able to circumvent Treasury control.

a development which worries administrators in Norway.[319] Moreover, state oil companies, like many public firms, often develop their own priorities which do not necessarily conform to those of the state. Public enterprises in general raise serious questions about for democracies given the problem of accountability and control. Obviously the question must be raised whether we risk the possibility of transferring authority out of the hands of politicians, accountable to the electorate, to technocrats accountable to no one but themselves. The rise of state oil companies reflects a general increase in public enterprise and raises important questions about the role of democratic government in an increasingly complex world.

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[319] J.J. Richardson, "Problems of Controlling Public Sector Agencies: The Case of Norwegian Oil Policy", *Political Studies* 29(1)March 1981, 35-50.

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